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Exploring metacognition in the narratives of therapeutic ruptures with staff within forensic mental health

CLINICAL RESEARCH PORTFOLIO

Volume 1

(Volume 2 bound separately)

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BSc Honours, MSc, MSc Applied Psychology

Submitted in partial fulfillment of the requirements for the degree of
Doctorate in Clinical Psychology

Institute of Health and Wellbeing

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University of Glasgow

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Table of Contents

Volume 1	Page
Chapter One: Systematic Review	7 – 44
The effectiveness of Mentalization Based Treatment (MBT): A Systematic Review	
Chapter Two: Major Research Project	45 – 85
Exploring metacognition in the narratives of therapeutic ruptures with staff within forensic mental health	
Chapter Three: Advanced Clinical Practice I. Reflective Critical Account (Abstract Only)	86 – 87
Reflections upon the challenges for a Trainee Clinical Psychologist working with difficult personality characteristics	
Chapter Four: Advanced Clinical Practice II. Reflective Critical Account (Abstract Only)	88 – 89
Managing the Challenges of Multi Disciplinary Team Working: Reflections of a Trainee Clinical Psychologist	
 Appendices	
Appendix 1: <i>Summary of Author Guidelines for Submission to Psychology and Psychotherapy: Theory Research and Practice</i>	91 – 95
 Systematic Review	
Appendix 2: <i>Summary of bias types</i>	96
Appendix 3: <i>Secondary Outcome Measures Used in the Included Studies</i>	97 – 98
 Major Research Project	
Appendix 4: <i>Interview Schedule</i>	99 – 101
Appendix 5: <i>Participant Information Sheet</i>	102 – 106

Table of Contents

	Page
Appendix 6: <i>Participant Consent Form</i>	107
Appendix 7: <i>Examples of types of ruptures and MAS and LACS coding from interview transcripts</i>	108 – 119
Appendix 8: <i>Ethical Approval Letter</i>	120
Appendix 9: <i>NHS R & D Approval Letter</i>	121 – 122
Appendix 10: <i>Major Research Project Proposal</i>	123 – 149

CHAPTER ONE SYSTEMATIC REVIEW

The effectiveness of Mentalization Based Treatment (MBT): A Systematic Review

Stephanie Victoria Elizabeth Hunter*

Declaration of interests: None

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Abstract

Background: Mentalization Based Treatment (MBT) was originally developed as a treatment for Borderline Personality Disorder (BPD) its application to other clinical domains has broadened in recent years. The purpose of the current review is to encapsulate the findings examining the effectiveness of MBT interventions across different clinical presentations.

Objectives: This systematic review aimed to evaluate studies published in peer-review journals that reported on Randomised Controlled Trials (RCTs) examining the effectiveness of MBT interventions across any clinical presentations against any control condition. In particular the review also aimed to investigate potential sources of bias in the included studies.

Method: A literature search of papers published between January 1995 – April 2015 was conducted using the keywords: *Mentalization Based Treatment, Mentalisation Based Treatment, Mentalization Based Therapy, Mentalisation Based Therapy, MBT, Mentaliz*, Mentalis**. The following databases were searched: MEDLINE, EMBASE, PsychInfo, CINAHL and The COCHRANE Library. The Cochrane Collaboration *risk of bias* tool was utilised to measure sources of bias.

Results: Ten papers describing seven trials comprising 600 participants (female n = 502, 83.6%) who were randomised to either MBT or any control condition, with a mean age of 28.7 years (range of 14 – 40 years) were included in the review. Most studies reported outcomes in favour of MBT. Risk of bias was generally unclear or high across all studies.

Discussion and Conclusion: MBT was associated with a reduction of personality disorder psychopathology, self-harm, depression and an improvement in infant health and attachment. However, risk of bias assessment strongly indicates a lack of clarity throughout the studies highlighting a need for further research evidence using high quality methodology in RCTs with low risk of bias.

Background and Rationale

Mentalization is a process of imaginative mental activity by which human beings perceive, make sense of and interpret both their own behaviour and the behaviour of others in terms of intentional mental states including needs, desires, feelings, beliefs, goals, purposes and reasons (Allen, Fonagy & Bateman, 2008).

Bateman & Fonagy (2012) describe mentalization as a form of social cognition and identify three dimensions of mentalization. The first dimension is related to modes of functioning and state that mentalization can be implicit e.g. unconscious and automatic. Allen (2006) highlights conversational turn taking as an example of implicit mentalization, where the individual holds the mind of their conversation partners in mind, allowing them to naturally anticipate when the other person might want to respond. In contrast mentalization can also be explicit e.g. conscious and this can be seen clearly during therapy when the therapist encourages the patient to deliberately consider the mental states of both themselves and others. It is important to note that these modes are not mutually exclusive and as such individuals can engage in them both at once (Allen, 2006). The second dimension refers to the objects, in that mentalization can be of the self or of another. An example of this comes from a parent's ability to mentalize and thus give reason to their infant's internal mental states solely through external features such as emotionally attuned parental behaviour and facial expression (Bateman & Fonagy, 2012). The third dimension of mentalization is concerned with the content of the mentalizing activity, which can be cognitive and affective. The individual therefore has to be able to consider mental states in both cognitive form and have insight into emotional reasoning (Allen, 2006).

Fonagy and Bateman (2007) have since expanded upon the theory of mentalization and how our capacity to mentalize develops during early childhood through our attachment relationships with our primary caregivers. Secure attachment relationships during infancy are significantly important in

the development of our social understanding, our ability to regulate our emotions and the development of our sense of self (Fonagy & Target, 1997). It is hypothesised that secure attachment and mentalization may both be facilitated by the same aspects of parenting. For example, studies have found that mothers who are more inclined to take a psychological perspective in relation to their own actions as well as the actions of their infant, are better able to accurately read the mental states governing their infant's behaviour (Bateman & Fonagy, 2012). Such a phenomenon is often referred to as maternal 'mind-mindedness' or 'reflective functioning' and this is thought to be a key aspect of parenting that results in the development of both secure attachment and the development of mentalization (Meins, Fernyhough, Wainwright, Gupta, Fradley & Tuckey, 2002).

By contrast infants who experience maltreatment and attachment trauma (such as abuse and neglect) tend to develop a distortion or deficit in mentalization. Alessandri (1991) demonstrated that maltreated children tend to fail to demonstrate typical empathetic responses to other children's distress. They also often develop a range of problems regarding difficulties with emotional processing (Rogoscha, Cicchetti & Aber, 1995). The result of such a social cognitive vulnerability can, provided other environmental and personal characteristics are present, predispose an individual to the development of psychological difficulties related to emotional dysregulation in adulthood such as personality difficulties and psychosis (Bateman & Fonagy, 2012).

Fonagy (1989) integrated the construct of mentalization into a psychoanalytically informed treatment for Borderline Personality Disorder (BPD) terming it Mentalization Based Treatment (MBT). BPD is a complex and serious mental health disorder characterised by a pervasive pattern of difficulties with emotion regulation, sense of self, interpersonal relationships and impulse control (Bateman & Fonagy, 2010). Bateman and Fonagy (2010) have formulated BPD as an unstable capacity for mentalization in that the individual, through early attachment trauma, has an impaired sense of self-awareness and self-regulation, which can manifest as BPD in adulthood.

The overall aim of MBT is to place the act of mentalizing at the centre of the therapeutic process. This therapeutic process is then used to stimulate mentalization within the patient through the establishment of an enduring secure attachment relationship with the therapist (Bateman & Fonagy 2012). Bateman and Fonagy state that ensuring a focus upon the patient's current mental state while activating the attachment system will enhance the patient's mentalizing capacity (Bateman & Fonagy, 2012).

The best evidence for MBT is in the treatment of BPD, Bateman and Fonagy published the first randomised controlled trial of MBT in 1999 comparing MBT to standard psychiatric care for participants diagnosed with BPD. They found that MBT significantly reduced attempts at suicide and self-harm, levels of depression and the length and number of hospital admissions compared to treatment as usual. They also found that MBT significantly increased social functioning for the participants. These findings were found at the end of the MBT with sustained and continued significant improvements across most measures at 18-months post treatment (Bateman & Fonagy, 2001). At 8 years post treatment Bateman and Fonagy, (2008) found that participants who had completed the MBT continued to demonstrate statistical significant improvements compared to the treatment as usual group on suicidality, diagnostic status, service use, use of medication, global functioning and vocational status.

MBT is now being applied to other disorders and clinical domains including depression (Jakobsen, Gluud, Kongerslev, Larsen, Sorensen, Winkel, Lange, Sogaard & Simonsen, 2014), eating disorders (Skarderud, 2007), professionals in crisis (Bleiberg, 2003), high-risk parent-infant dyads (Sadler, Slade, Close, Webb, Simpson, Fennie & Mayes, 2013), families (Fearon, Target, Sargent, Williams, McGregor, Bleiberg & Fonagy, 2006) and school based communities to reduce violence (Twemlow & Fonagy, 2006). Preliminary findings suggest that MBT reduces suicidality, self-harm and depression rates and that MBT improves interpersonal functioning and the development of secure attachments in high-risk parent-infant dyads. Allen,

Fonagy and Bateman (2008) have gone on to propose that mentalization is an essential mechanism of change in all effective therapies.

Previous Reviews

Previous systematic reviews have tended to focus upon MBT solely as treatment of BPD. Zanarini (2009) carried out a more general review of the literature regarding psychotherapy for BPD. She included studies of MBT, Transference-Focused Psychotherapy, Dialectical Behavioural Therapy and Schema-Focused Therapy. Zanarini (2009) concluded that her review of the current literature indicated that these four manualized treatments for BPD have been proven to be somewhat effective in reducing BPD symptoms including self-harm and suicide attempts but that the evidence does not particularly highlight one treatment as better than another. Stoffers, Vollm, Rucker, Timmer, Huband and Lieb, (2012) carried out a review of psychological therapies for people diagnosed with BPD. This review included the use of The Cochrane Collaborations' *risk of bias* tool (Higgins, Altman & Sterne, 2011). Similar to the findings of the previous review, Stoffers et al., (2012) stated that while there was evidence to support the use of MBT as a treatment for BPD (Bateman & Fonagy, 1999; 2009) because it reduced suicidality, parasuicidality, interpersonal problems and depression, this was scarce and further evidence was required to support these findings. Other reviews have been carried out (Barnicot, Katsakou, Marougka & Priebe, 2011; Barnicot, Katsakou, Bhatti, Savill, Fearn & Priebe, 2012) that have focused again on treatments for BPD, including MBT, but have been concerned with rates of treatment completion and the factors that predict outcome rather than the effectiveness of MBT.

Objectives

The purpose of this systematic review therefore, was to encapsulate the findings from current peer-reviewed Randomised Controlled Trials (RCTs), examining the effectiveness of MBT interventions for any condition compared to any control condition. The review also aimed to document sources of bias in the included studies. In order to comprehensively consider the above objectives, in terms of specific questions, the PICO framework (Oxman, Sackett, & Guyatt, 1993; Richardson, Wilson, Nishikawa, & Hayward, 1995) was used to develop the following additional questions:

- Who are the participants involved in the studies and what are their characteristics?
- What is the primary diagnosis of the participants involved in the studies?
- How is the MBT delivered and is there evidence of fidelity to the intervention? In what setting is the intervention delivered?
- What does the comparator/control group consist of in the included studies?
- What are the studies' outcomes regarding MBT as an intervention and what outcome measures are used to determine MBTs effectiveness?

Method

Eligibility Criteria

Inclusion Criteria: Studies were included if they were published in a peer reviewed journal; in English language; were a Randomised Controlled Trial; with an age range of 12 to 65 years; the target intervention was any diagnosis being treated by Mentalization Based Treatment; and were published between January 1995 and April 2015.

Exclusion Criteria: Studies were excluded if they were published in non English language; employed a qualitative methodology; non-peer reviewed publications; book chapters; review papers or PhD theses; single case studies; if Mentalization Based Treatment was not employed as an intervention; non randomised control trials.

Search Strategy

Computerised Search: The following electronic databases were searched for relevant studies on 6th April 2015: MEDLINE, EMBASE, PsychInfo, CINAHL and The COCHRANE Library. Additional searches were carried out utilizing the Web of Science and Google Scholar. As well as searches of the World Health Organization International Clinical Trials Registry Platform (ICTRP), the Clinical Trials.gov (A service of the U.S. National Institutes of Health) and the NHS Choices Clinical trials and medical research - Clinical trials were carried out to determine if published studies had also published their protocol and whether the protocol was consistent

with the published manuscript. The following search terms and boolean operators were used:

[Mentalization Based Treatment] OR [Mentalisation Based Treatment] OR [Mentalization Based Therapy] OR [Mentalisation Based Therapy] OR [MBT] OR [Mentaliz*] OR [Mentalis*]. None of these search terms or boolean operators identified Medical Subject Headings (MeSH) and all terms had to be searched for separately from the Medical Subject Headings. Abstracts from relevant journals were examined to determine whether papers met eligibility criteria. Review papers were also searched to identify any further eligible studies. The reference section of papers that were identified by the electronic database searches were inspected to identify additional studies to be included in the review.

Rating of Included Studies

Included studies were evaluated according to The Cochrane Collaboration's *Risk of Bias* tool (Higgins, Altman, Gotzsche, Juni, Moher, Oxman, Savovic, Schulz, Weeks, & Sterne, 2011). PRISMA (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009) introduced *risk of bias* as a different approach to systematically critiquing research in place of the former approach of critiquing the methodological quality that previous authors have used. They highlight the importance of distinguishing between quality and risk of bias and that when conducting a systematic literature review, the latter should be the focus of the evaluation and reporting of the included studies.

In the past, studies have been evaluated using scales, checklists and individual components. However, PRISMA (2009) has cautioned against the use of scales based upon theoretical grounds and emerging empirical evidence. A report by Juni, Witschi, Bloch & Egger (1999) state that the use of summary scores derived from scales can be problematic and instead suggest that appropriate methodological components, such as allocation concealment, blinding of outcomes and handling of withdrawals, should be assessed instead. Greenland & O'Rourke (2001) provide further support for this, stating that summary scores derived from scales are poor predictors of actual study results and as such produce skewed estimates of effect. PRISMA (2009) suggests the use of the Cochrane *Risk of Bias* tool instead, it is a component based approach to evaluate the risk of bias within a study and is based upon domains that have been established through good empirical evidence.

The Cochrane *Risk of Bias* tool is comprised of five items: Random Sequence Generation (selection bias), Allocation Concealment (selection bias), Blinding of Participants and Personnel (performance bias), Blinding of Outcome Assessment (detection bias), Incomplete Outcome Data Addressed (attention bias), and Selective Reporting (reporting bias) See Appendix 2 for more detail on the risk of bias tool domains. Each domain has been included based upon empirical evidence for its biasing influence upon the estimated effectiveness of an intervention in randomised control trials. When carrying out a systematic literature review, the researcher is advised to consider all aspects of the study that may have an effect upon the results (Moher,

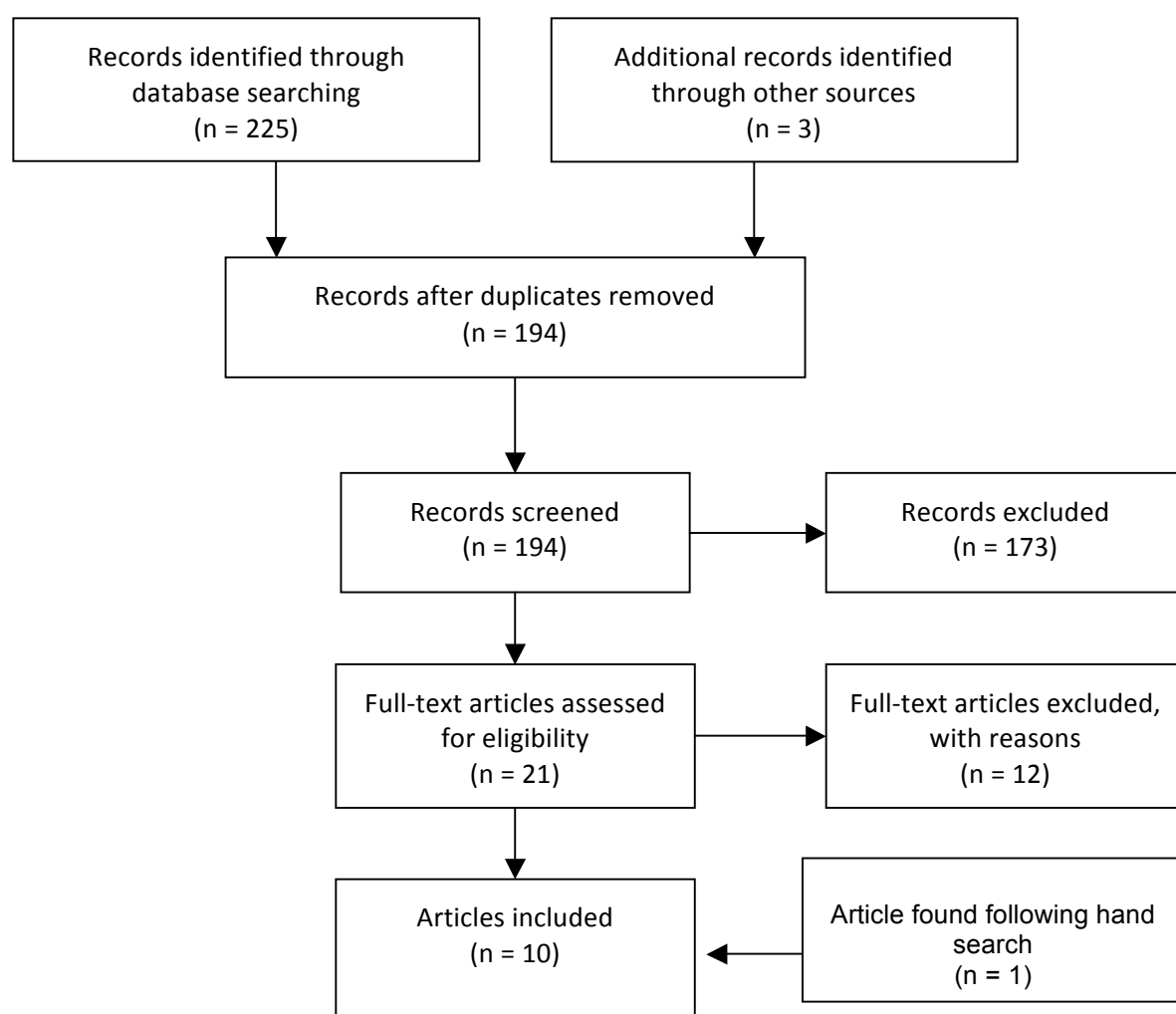
Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009). The Cochrane Handbook for Systematic Reviews of Intervention (Higgins, Altman, & Sterne, 2008) was consulted for guidance on how to apply the Cochrane *Risk of Bias* tool. See appendix 2 for a summary of the types of bias. Calibration training was also carried out with a highly experienced researcher to support the application of the Cochrane *Risk of Bias* tool within this review.

Results

Literature search

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram of the study selection process (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009) provides a summary of the process utilized to select the studies included in this review (See Figure 1).

Figure. 1 PRISMA (2009)* Flowchart of the article selection process



*From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097

225 potential papers were identified through the electronic search, a further 3 studies were identified via searches of the International Clinical Trials Registry Platform and Clinical Trials.Gov. Of these 34 duplicates were extracted using RefWorks, an online research management tool. A further 173 were excluded following a screen of the article abstracts. Reasons for exclusion were as follows: non-English articles (n = 14), Further duplicates not detected by RefWorks (n = 22), non Randomised Controlled Trials (n = 137). Following this, full text articles were assessed for the 21 remaining papers, 8 of which were review papers so they were excluded once a hand search of the reference lists had been carried out (no additional papers were identified following these searches) of the 13 papers remaining 4 were excluded after two reviewers assessed the articles following the inclusion and exclusion criteria (A.G. & S.H). Reasons for exclusion were as follows: intervention was not Mentalization Based (n = 2), Study did not meet the criteria of an RCT (n = 1) and participants were children (<12 years of age) (n = 1). One additional paper was identified through hand searches of the reference lists of the remaining 9 papers.

Included studies

Table 1 provides a summary of included studies. There were 10 papers describing 7 separate Randomised Controlled Trials that met inclusion criteria for this review: Arnevik, Wilbreg, Urnes, Johansen, Monsen and Karterud, 2008; Bateman and Fonagy, 1999; Bateman and Fonagy, 2001; Bateman and Fonagy, 2008; Bateman and Fonagy, 2009; Gullestad, Johansen, Hoglend, Karterud and Wilberg, 2013; Jakobsen, Gluud,

Kongerslev, Larsen, Sorensen, Winkel, Lange, Sogaard and Simonsen, 2014; Jorgensen, Freund, Boye, Jordet, Andersen and Kjolbye, 2013; Rossouw and Fonagy, 2012; and Sadler, Slade, Close, Webb, Simpson, Fennie and Mayes, 2013.

Study/participant characteristics

There were 600 participants randomised across the 7 included RCTs. The mean age of the participants was 28.7 years (range of 14 – 40 years). Of these, 83.6% (n = 502) participants were female. A variety of recruitment sites were identified; two of the studies (13.7%; n = 82) recruited from general psychiatric services (Bateman & Fonagy, 1999; Jakobsen et al., 2014), three studies (55.5%; n = 333) recruited from specialist personality disorder departments/clinics (Arnevik et al., 2009; Bateman & Fonagy, 2009; Jorgensen et al., 2013), one study (13.3%; n = 80) recruited from adolescent community mental health services and acute admission to hospital emergency (Rossouw & Fonagy, 2012), and one study (17.5%; n = 105) recruited directly from prenatal groups (Sadler et al, 2013). The diagnosis of the participants included personality disorder (19%; n = 114), Borderline Personality Disorder or Severe Personality Disorder (42.9%; n = 257), Major Depressive Disorder (7.3%; n = 44), Self-Harm (13.3%; n = 80) and young (14 – 25 years), first time mothers (17.5%; n = 105).

Intervention, Delivery & Fidelity

Table 1 provides a summary of the delivery of and interventions used in the studies included in this review. Only the study by Jakobsen et al.

(2014) assessed therapist's fidelity to the MBT intervention manual. Results showed high adherence to the treatment manual with mean ratings of 4.2 (out of 5) for the individual psychotherapy and 3.8 (out of 5).

Comparators

The control comparator for four out of the seven included studies consisted of treatment as usual (TAU), comprising similar times in individual and group psychotherapy as the intervention (Arnevik et al., 2009; Bateman & Fonagy, 1999; Bateman & Fonagy, 2009; Rossouw & Fonagy, 2012). One of the studies used supportive group therapy as the control comparator (Jorgensen et al., 2013). The study by Jakobsen et al., (2014) compared MBT to a Third Wave Cognitive Individual Psychotherapy and a weekly mindfulness-skills training group. One study compared the 'Minding The Baby' program to treatment as usual, which consisted of Community Health Centre (CHC) care as usual (Sadler et al., 2013).

Primary Outcome Measures

Table 1 provides details of the various measures used in the included studies. The most commonly used measure was the frequency of attempted suicide and self-harm (Arnevik et al., 2009; Bateman & Fonagy, 1999; Bateman & Fonagy, 2009; Rossouw & Fonagy, 2012). For all of these studies this was achieved via self-report and was then quality checked during the research interviews. Two of these studies (Bateman & Fonagy, 1999; Bateman & Fonagy, 2009) also measured hospital admission and length of stay as a primary outcome measure, while another also included attrition

rates as a primary outcome measure. Gullestad et al., (2013) used the Reflective Functioning Scale as a Primary outcome measure. Jakobsen et al., (2014) used the Hamilton Rating Scale for Depression (HRSD) as their primary outcome measure. Jorgensen et al., (2013) used symptom distress (Symptom Checklist, SCL-90-R) as their primary outcome measure, along with a depression and anxiety measure (Beck Depression Inventory, BDI and State-Trait Anxiety Inventory, STAI). Sadler et al., (2013) focused upon Maternal-Child Health Outcomes as their primary outcome measure, specifically looking at childbearing patterns, immunization and paediatric check up records. This study also included mother-infant interaction as one of their primary outcome measures and assessed this through the Atypical Maternal Behaviour Instrument for Assessment and Classification (AMBIANCE; Lyons-Ruth, Bronfman, & Parsons, 1999), which was coded from maternal behaviour during the Strange Situation Procedure (SSP; Ainsworth, Blehar, Walters & Hall, 1978).

Table 1 provides details of the various secondary outcome measures used in the included studies (see Appendix 3 for a more detailed summary of the secondary outcome measures).

Findings

Table 1 provides a summary of the included studies findings. In general, all but one of the studies had significant findings in favour of the MBT interventions. Five of the included studies (Bateman & Fonagy, 1999; Bateman & Fonagy, 2001; Bateman & Fonagy, 2008; Bateman & Fonagy,

2009 & Rossouw & Fonagy, 2012) found a significant reduction in the incidents of self-harm and suicide for the MBT intervention groups in comparison to the control groups. The Bateman & Fonagy studies (1999; 2001; 2008 & 2009) also found a significant reduction in hospitalization for the MBT groups compared to the control groups. These studies also found secondary outcomes of reduced depression, and improved social adjustment and interpersonal problems all in favour of MBT. A further secondary outcome reported by these studies was a significant reduction in the severity of participants' symptoms for the MBT group compared to the control group. Bateman & Fonagy (2008) found a secondary outcome in their long term, 8 year, follow up that there was a large effect size favouring the MBT group concerning a reduction in participants meeting the diagnostic criteria for borderline personality disorder ($d=2.0$, 95% CI 1.4-4.9). Bateman & Fonagy (1999 & 2001) also found secondary significant improvements in both state and trait anxiety levels immediately following intervention for the MBT group compared to the control group but only for state anxiety (not trait) at the 18 month follow up for the MBT group compared to the control group.

Jakobsen et al., (2014) found a significant difference in HDRS depression scores in favour of the MBT group compared to the Third Wave Cognitive Therapy (TWCT) comparison group, when the scores were adjusted for baseline, however they did not have any other significant findings in favour of the MBT. In fact they found a significant difference in favour of the TWCT comparison group regarding remission rates of depression compared to the MBT group. Jorgensen et al., (2013) found a

significant increase in therapist rated Global Functioning in favour of the MBT group, but no other significant findings in favour of MBT.

Rossouw & Fonagy (2012) found significant improvements in incidents of self-harm and suicide, a reduction of self reported borderline personality features and self reported measures of depression for the MBT-A group in comparison to the TAU group. Sadler et al., (2013) primary outcome findings were that infants in the MTB mentalizing intervention were more likely than controls to be up-to-date with immunizations at 12 months; however, by 24 months, both groups were up-to-date with the immunization schedule. Also, mothers in the MTB intervention were significantly less likely to have rapid subsequent child bearing than the mothers in the control group. Sadler et al., (2013) secondary outcome findings consisted of a significantly higher percentage of securely attached infants in the MTB group compared to the TAU group and there was also a significantly lower percentage of children classified as being disorganised in relation to attachment in the MTB group compared to the TAU group.

Finally the study by Gullestad et al., (2013), concerned with mentalization as a moderator of treatment effects, found that reflective function had a significant moderator effect for the period of 8 – 36 months but not for the period of 0 – 8 months. Arnevik et al., (2009) also did not report any significant findings in favour of the mentalization based intervention group.

Table 1 Summary of included studies.

Study and Method	Included Participants	Primary Diagnosis	Intervention	Control Comparator	Primary Outcome Measures	Secondary Outcome Measures	Findings
1. Arnevik, Wilberg, Urnes, Johansen, Monsen & Karterud (2009) Norway RCT	114 randomised (60 in DHP and 54 in OIP). Mean age 31 years (SD = 7.4). 74% female, 26% male.	A diagnosis of PD, according to DSM-IV using SCID-II interview.	Eighteen-week DHP, including relational psychology, group analysis, self-psychology and mentalization.	OIP therapists were instructed to treat patients according to their own preferred method of practice	Attrition rates, Self injury, Suicide attempts.	Symptom distress (SCL-90-R), Interpersonal problems (CIP), Psychosocial functioning (GAF), Personality problems (SIPP-118).	Higher attrition rates in DHP but not statistically significant. Some reduction in self-injury, suicidal thoughts and attempts but not statistically significant. Statistically significant change over time but no difference in the amount of change between treatment conditions. Psychosocial functioning between treatment conditions was not statistically significant. No significant difference between treatment groups for the more severely impaired patients on sociodemographic variables, symptoms, interpersonal and personality problems, or PD diagnosis (except fulfilment of paranoid SCID –II, DHP mean = 1; OIP mean = 3). No statistical difference in change scores on the clinical measures between the two treatments, except for interpersonal problems – in favour of OIP.

Table 1 Continued

Study and Method	Included Participants	Primary Diagnosis	Intervention	Control Comparator	Primary Outcome Measures	Secondary Outcome Measures	Findings
2. Bateman & Fonagy (1999) UK RCT	44 randomised (3 crossovers due to suicide attempts, 3 drop outs, leaving 19 in partially hospitalized group (PHG) and 19 in standardised psychiatric care /control group). Mean age 31.8 years (SD = 6.23). PHT: 68% female, 32% male; Control: 47% female, 53% male.	Diagnosis of BPD, according to DSM-III-R using SCID interview and the DIBP.	PHG: 1/7 individual psychoanalytic psychotherapy, 3/7 group analytic psychotherapy, 1/7 expressive therapy, 4/7 community meetings. All based in accordance with the psychodynamic model of BPD as a disorder of attachment, separation tolerance, and mentalization.	Standard treatment in general practice: regular psychiatric review with inpatient admission where appropriate. Followed with discharge to non-psychoanalytic psychiatric partial hospitalisation with outpatient community follow up.	Suicidal acts and acts of self harm (the Suicide and Self Harm Inventory), Number of hospital admissions and length of stay. Need for medication.	Symptom distress (SCL-90-R), Depression (BDI), Anxiety (Spielberg STAI), Social adjustment (modified Social Adjustment Scale), Interpersonal functioning (Inventory of Interpersonal Problems)	Number of incidents of self-harm decreased in PHG but remained constant in control group. Significant reduction in suicide attempts for the PHG but not for the control group. There was a significant difference in the number of inpatient episodes and average length of hospitalization between the groups in the last 6 months of the study it was increased dramatically for the control group, where as the PHG remained relatively stable. There was a reduction in medication for both groups; the reduction was significantly different for the PHG when compared to the control group. There was a significant reduction in the severity of symptoms reported in the PHG, however there was no change in number of symptoms reported. Both self reported state and trait anxiety was significantly reduced in the PHG but remained unchanged in the control group. Depression scores were also significantly decreased for the PHG and this was significantly greater than the control group. Self report for Social Adjustment was significantly lower for the PHG as was the Interpersonal Problems score.

Table 1 Continued

Study and Method	Included Participants	Primary Diagnosis	Intervention	Control Comparator	Primary Outcome Measures	Secondary Outcome Measures	Findings
3. Bateman & Fonagy (2001) 18 month follow up on above study. UK RCT	As above – study 2 (all participants included in the follow up)	As above – study 2	As above – study 2	As above – study 2	As above – study 2 (Same measures taken at follow up)	As above – study 2 (Same measures taken at follow up)	<p>There was a significant reduction in the levels of self-harm in the PHG.</p> <p>More incidences of self-harm were committed during the 18-month follow up by patients in the control group.</p> <p>Significantly fewer suicide attempts were made by the PHG.</p> <p>There were significantly more hospital admissions for the control group.</p> <p>There were significantly fewer inpatient hospitalization treatment days for the PHG.</p> <p>Patients who completed the PHG had significantly fewer outpatient psychiatric consultations.</p> <p>Significantly more of the patients in the control group were receiving more than one class of drug (polypharmacy).</p> <p>Patients completing the PHG had significantly lower scores of symptom distress, and this was a greater significant difference between the groups at the time of follow up.</p> <p>Patients who had completed the PHG scored significantly lower for state anxiety throughout the follow up period, yet trait anxiety did not produce the same effect.</p> <p>Patients who completed the PHG reported themselves as significantly less depressed.</p> <p>There was a significant difference in improvement of social adjustment in favour of the PHG compared to the control group.</p> <p>There was a statistically significant lowering of interpersonal problems for the PHG.</p>

Table 1 Continued

Study and Method	Included Participants	Primary Diagnosis	Intervention	Control Comparator	Primary Outcome Measures	Secondary Outcome Measures	Findings
4. Bateman & Fonagy (2008) 8 year follow up of study number 2 above UK RCT	As above – study 2 (all participants included in the follow up)	As above – study 2	As above – study 2	As above – study 2	Number of suicide attempts over the past 5 years since 18 month follow up.	Symptom status (follow up interview using the Zanerini Rating Scale for DSM-IV BPD), global functioning (GAF), contact with mental health services, vocational status, medication.	There were significantly fewer incidences of suicide attempts in the PHG. The control group patients received significantly more input from psychiatric services. More patients in the control group were taking antipsychotic medication. There was a large effect size favouring the PHG concerning a reduction in patients meeting the diagnostic criteria for BPD (however with a wide confidence interval). The Zanarini Rating Scale also produced significant differences favouring the PHG in terms of impulsivity and interpersonal functioning. There was a clinically significant difference in favour of the PHG in terms of GAF scores.
5. Bateman & Fonagy (2009) UK RCT	134 randomised (71 in the MBT condition, 63 in the SCM condition) Mean age MBT=31.3 years (SD=7.6); SCM=30.9 years (SD=7.9). MBT: 80.3% female, SCM: 79.4% female.	A diagnosis of BPD, according to DSM-IV using SCID-I and SCID-II interview, or suicide attempt/episode of life-threatening self harm within last 6 months.	Mentalization-Based Treatment (MBT) consisting of a manualized approach including 18 months of weekly combined individual and group psychotherapy.	Structured Clinical Management (SCM) consisting of regular individual and group sessions.	Suicide attempt, life threatening self harm, hospital admission	Symptom distress (SCL-90-R), Depression (BDI), Social Adjustment Scale, Inventory of Interpersonal Problems and GAF.	Statistically significant improvements in suicidal behaviour and severe self-injurious behaviour for the MBT condition compared to the SCM condition. Hospitalization was significantly improved for the MBT condition in comparison to the SCM condition. Mean GAF rating increased substantially for both groups, but the increase was greater for the MBT group. There was a marked improvement on all self-rated measures for both groups. With significantly less self-reported symptom distress, relationship and social adjustment problems in the MBT group.

Table 1 Continued

Study and Method	Included Participants	Primary Diagnosis	Intervention	Control Comparator	Primary Outcome Measures	Secondary Outcome Measures	Findings
6.Gullestad, Johansen, Hoglend, Karterud & Wilberg (2013) Follow on study from study number 1 above Norway RCT	As above – study 1	As above – study 1	As above – study 1	As above – study 1	Reflective Functioning (RF Scale)	Symptom distress (SCL-90-R, the scores were then summarised with the Global Severity Index – GSI), Interpersonal problems (CIP), Psychosocial functioning (GAF).	RF had a significant moderator-effect for the period of 8-36 months but not for the period of 0-8 months. Therefore treatment effect for the period of 8-36 months was significantly different for patients with medium-high and low RF. With CIP as the dependent variable patients with low RF improved more with OIP than with the DHP; in contrast, patients with medium-high RF did equally well with both treatment modalities. With GSI as the dependent variable RF had no significant moderator-effect for either low or medium-high RF. A non-significant trend between RF and GAF for the period of 0-8 months implies that patients with medium-high RF improve more than patients with low RF during the first 8 months across treatments.
7.Jakobsen, Gludd, Kongerslev, Larsen, Sorensen, Winkel, Lange, Solgaard & Simonsen (2014) Denmark RCT	44 randomised (TWCT, and 22 to MBT). Mean age TWCT=38.5 years (SD=8.9); MBT=40.3 years (SD=6.8). TWCT 82% female, MBT 91% female.	Major Depressive Disorder , whether first episode or recurrent. Disorder, according to DSM-IV-TR using SCID-I and SCID-II interview.	MBT: Weekly individual psychotherapy session and weekly mentalisation-based group therapy session.	TWCT: Weekly third-wave cognitive individual psychotherapy session and weekly mindfulness-skills training group.	Depression ratings (HDRS)	Proportion in remission – HDRS<8, Symptom severity (GSI score on SCL-90-R), Wellbeing (WHO 5) and depression (BDI)	No significant difference in HDRS scores unadjusted between the treatment groups. However the difference was significant when HDRS scores were adjusted for baseline. There was a significant difference in favour of the TWCT treatment group for remission rates. No significant differences were found between treatment groups for BDI, GSI or WHO 5.

Table 1 Continued

Study and Method	Included Participants	Primary Diagnosis	Intervention	Control Comparator	Primary Outcome Measures	Secondary Outcome Measures	Findings
8. Jorgensen, Freund, Boye, Jordet, Anderson & Kjolbye (2013) Denmark RCT	85 randomised (58 to MBT and 27 to SGT). Mean age MBT=29.5 years (SD=6.5); SGT=29.7 years (SD=6.8). MBT 97% female, SGT 93% female.	A diagnosis of Borderline Personality Disorder, according to DSM-IV using SCID-II interview.	Dr Anthony Bateman's manualized MBT.	SGT: focusing upon the individual in the group. Included verbalizing and understanding interpersonal behaviour.	Symptom Severity (GSI score on SCL-90-R), Depression (BDI), Anxiety, (State-Trait Anxiety Inventory, STAI and BAI).	GAF Social Adjustment Scale and Inventory of Interpersonal Problems.	Therapist-rated global level of functioning increased significantly in the MBT treatment group. In the STG only GAF-S changed significantly. No significant findings of influence of axis I diagnosis on treatment. In the MBT group treatment outcome was lower in patients who had a comorbid eating disorder, and higher in patients with comorbid anxiety.
9. Rossouw & Fonagy (2012) UK RCT	80 randomised (40 to MBT-A and 40 to TAU). Mean age MBT-A=15.4 (SD=1.3); TAU=14.8 (SD=1.2). MBT-A 82.5% female, TAU 87.5% female.	Adolescents (12 – 17 years) presenting with self-harm.	MBT-A is a year long manualized, psychodynamic psychotherapy program, with weekly individual sessions and monthly mentalization-based family therapy (MBT-F).	TAU consisted of routine care provided by community-based adolescent mental health services. Delivered by fully qualified child mental health professionals and based upon NICE guidance.	Self harm (assessed by self-report, using the self-harm scale of the Risk-Taking and Self-Harm Inventory, RTSHI) and confirmed by using the Childhood Interview for DSM-IV Borderline Personality Disorder (CI-BPD).	Depression (MFQ), Risk taking (RTSHI), A measure of borderline features (BPFS-C), How I Feel Questionnaire (HFQ) and Attachment (assessed using the Experience of Close Relationships Inventory ECR).	Both groups showed significant reductions in both self-harm and risk-taking behaviour but this was significantly greater for the MBT-A group. The level of self reported depression decreased for participants in both groups, this was somewhat greater for the MBT-A group, yielding a significant difference at 12 months, but this decreased towards the end of treatment. The reduction of self reported borderline personality features was significant for both groups but was significantly greater for the MBT-A group. HFQ scores were unchanged in the TAU group and increased in the MBT-A group. ECR attachment avoidance rating decreased sustainably more for the MBT-A group.

Table 1 Continued

Study and Method	Included Participants	Primary Diagnosis	Intervention	Control Comparator	Primary Outcome Measures	Secondary Outcome Measures	Findings
10. Sadler, Slade, Close, Webb, Simpson, Fennie & Mayes (2013)	105 families randomised (60 to the MTB Intervention and 45 to the CHC, usual care). Mean overall age=19.6 years (SD=2.9).	Young, first time mothers (14-25 years of age), no DSM-IV psychotic disorder and no terminal disorder.	Minding The Baby (MTB) model has a focus on mentalization. MTB consisted of weekly home visits from pre-pregnancy until 12 months, followed by fortnightly visits until 24 months.	Community Health Centre, care as usual (CHC), participants received routine pre- and postnatal well-woman and well-baby healthcare visits as dictated by clinical guidelines and immunization schedule.	Maternal-Child Health Outcomes (measured by child bearing patterns, immunisation and paediatric check up records).	Maternal RF (PI, PDI – scored for RF), maternal mental health (CES-D, BSI leading to GSI, PBI, mother infant interaction – AMBIANCE and the Strange Situation Procedure).	The MTB group was significantly more likely than the controls to be up to date with immunizations at 12 months. Mothers in the MTB group were significantly less likely to have rapid subsequent child-bearing than mothers in the control group. No significant difference in AMBIANCE scores between groups. Significantly higher percentage of secure infants in the MTB group than the control group. There was also a significantly lower percentage of children classified as being disorganised in relation to attachment in the MTB group compared with the control group. No significant difference in RF between the groups.

Borderline Personality Disorder (BPD), Mentalization Based Treatment (MBT), Day Hospital Program (DHP), Outpatient Individual Psychotherapy (OIP), The Diagnostic and Statistical Manual of Mental Disorders (DSM - version III, IV, IV-R, V), The Structured Clinical Interview for DSM Disorders (SCID), The Symptom Checklist-90-Revised (SCL-90-R), Circumplex of Interpersonal Problems (CIP), Global Assessment of Functioning (GAF), The Severity Indices of Personality Problems (SIPP-118), Partially Hospitalized Group (PHG), Borderline Personality Disorder (BDP), Diagnostic Interview for Borderline Patients (DIBP), Beck Depression Inventory (BDI), Spielberg State Trait Anxiety Inventory (STAI), Mentalization Based Treatment (MBT), Standard Deviation (SD), Structured Clinical Management (SCM), Global Severity Index (GSI), The Circumplex of Interpersonal Problems (CIP), Global Assessment of Functioning (GAF), Reflective Functioning (RF), Hamilton Depression Rating Scale (HDRS), The World Health Organization Wellbeing Index (WHO-5), Third Wave Cognitive Psychotherapy (TWCP), Supportive Group Therapy (SGT), Beck Anxiety Inventory (BAI), Treatment As Usual (TAU), The National Institute for Health and Care Excellence (NICE), Risk Taking and Self Harm Inventory (RTSHI), Childhood Interview for DSM – IV BPD (CI – BPD), Moods and Feelings Questionnaire (MFQ), Experience of Close Relationships Inventory (ECR), MBT Adolescents (MBT – A), MBT Family Therapy (MBT – F), Minding the Baby Program (MTB), Community Health Centre Care As Usual (CHC), Pregnancy Interview (PI), Parent Development Interview (PDI), Center for Epidemiological Studies Depression Scale (CES – D), Brief Symptom Inventory (BSI), Parental Bonding Instrument (PBI), Atypical Maternal Behaviour Instrument for Assessment and Classification (AMBIANCE).

Risk of Bias Analysis

Tables 2 and 3 summarise the risk of bias assessments of the included studies. All included texts were evaluated by the author, seventy percent (n=7) of the included papers were calibrated with the Research Supervisor as part of the author's training regarding the use of the risk of bias tool. A further sixty percent (n=6) of the included studies were randomly selected and independently second-rated by two final-year Trainee Clinical Psychologists (thirty percent each) to assess for inter-rater reliability, resulting in a 97% agreement rate and any disagreements resolved in a consensus meeting of the three evaluators.


In assessing risk of bias most of the studies indicated either a lack of clarity or a risk of bias for the majority of the risk of bias domains. Only two of the studies (Bateman & Fonagy, 2009 & Rossouw & Fonagy, 2012) achieved the judgement of 'low' risk of bias for three out of the seven risk domains. The majority of the studies did not provide sufficient detail regarding Sequence Generation or Allocation Concealment and therefore had to be judged as having an 'unclear' risk of bias. The studies also lacked adequate information regarding the blinding of their outcome assessors and how they would deal with un-blindings. The majority of the studies did include an intention-to-treat (ITT) analysis as a way of managing drop out data. As such they were judged to be of 'low' risk of bias for Incomplete Outcome Data. Due to the time constraints of this review it was not possible to contact the study authors to request access to study protocols. The majority of studies,

therefore, were assigned the judgement of 'unclear' risk of bias for the Selective Reporting domain.

It is almost impossible to keep participants blinded to treatment allocation in psychological intervention studies despite best efforts, and it is completely impossible to blind the therapists to the intervention they are delivering. Based upon this it was decided not to rate risk of bias for this domain and instead opt for a not applicable statement, given the inability to control for such difficulties.

Table 2 'Risk of bias' summary: review author's judgements about each risk of bias item for each included study.

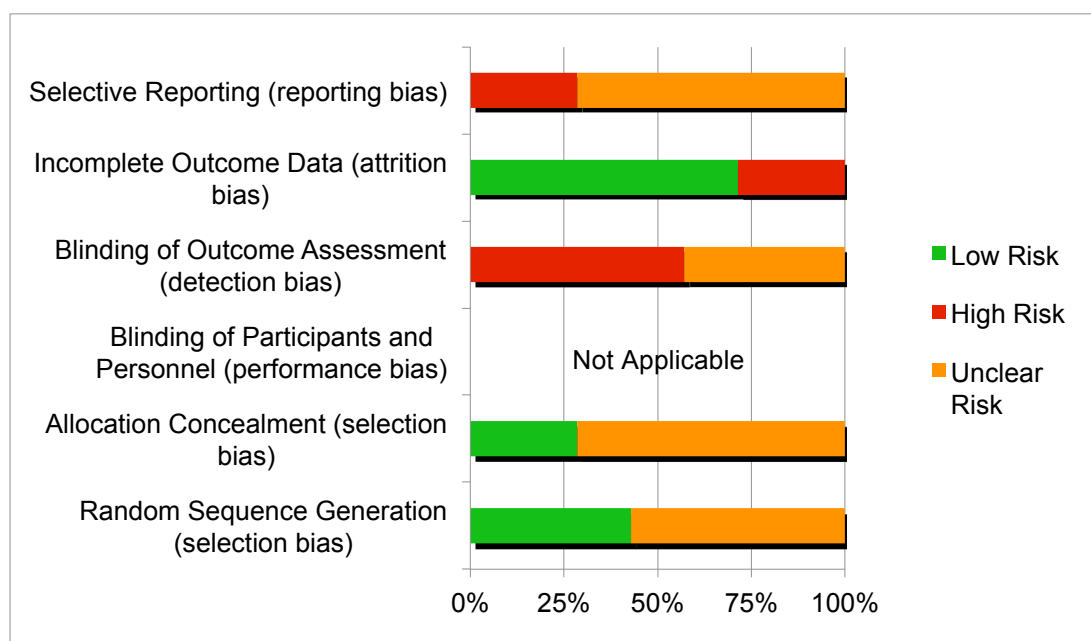
Reference/Domain	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)
1. Arnevik, Wilberg, Urnes et al (2009) & Gullestad, Johansen, Hoglend et al (2013)			N/A			
2. Bateman & Fonagy (1999); (2001); (2008)			N/A			
3. Bateman & Fonagy (2009)			N/A			
4. Jakobsen, Gludd, Kongerslev et al (2014)			N/A			
5. Jorgensen, Freund, Boye et al (2013)			N/A			
6. Rossouw & Fonagy (2012)			N/A			
7. Sadler, Slade, Close et al (2013)			N/A			

Low Risk = 

High Risk = 

Unclear Risk = 

Table 3 'Risk of bias' table: review author's judgements about each risk of bias item presented as percentages across all included studies.



Discussion

This review aimed to evaluate current peer-reviewed randomised controlled trials examining the effectiveness of Mentalization Based Treatment (MBT) across a number of different diagnostic presentations, in the last 20 years. This review also aimed to investigate potential sources of bias within the included studies. As such, the review has also provided an opportunity to consider the effectiveness of MBT and how this intervention model could be applied to numerous areas within mental health in the future.

Given that no previous reviews concerned with the effectiveness of MBT across different diagnoses could be found, this review took a novel approach to the examination of the effectiveness of MBT. Previous reviews have tended to focus upon a specific diagnosis, such as Borderline Personality Disorder, and have then compared the effectiveness of MBT to other interventions in the treatment of said diagnosis. The current review showed that the most common application of MBT was for personality disorder, however additional studies were identified applying MBT to depression, self-harm and the early infant health and parental relationship. The most common comparator used in the included studies was treatment as usual. With regards to measuring outcomes, most of the included studies focused upon the frequency of acts of self-harm and attempted suicide. As with previous review findings, this review has shown that MBT tended to be associated with a reduction of personality disorder psychopathology, suicidality, self-harm, depression and improvements in infant health and attachment, social adjustment and interpersonal problems.

Evaluating included studies for their 'risk of bias' is a process by which the reviewer is guided to consider the aspects of the study quality that could have an effect upon the results (PRISMA, 2009). It is clear to see that the risk of bias assessment strongly indicates a lack of clarity. Key methodological limitations included a lack of information regarding the randomisation and allocation concealment process as well as the management of outcome assessors un-blinding. Two of the included studies

(Jorgensen et al., 2013 & Sadler et al., 2013) appeared to report selective results or carried out what appeared to be unplanned analyses. Such a lack of clarity has important implications upon the reported outcomes of the included studies and these results highlight a need for further research evidence using high quality methodology in RCTs with low risk of bias.

Limitations of current review

A key limitation within this review is the lack of inter-rater reliability in the abstract screening process for inclusion in the current review. All of the 194 abstracts were screened by the author, only 22 of which were then second screened by an independent evaluator.

With regards to the rating of 'risk of bias' for the 'selective reporting' domain, most of the studies were rated as having an 'unclear risk of bias' due to the limited information regarding evidence of selective reporting. This means that systematic differences between reported and unreported findings were not fully addressed. As previously stated, due to the time constraints of the review it was not possible to contact study authors to request access to study protocols.

As mentioned above, the findings from this review are somewhat scarce and there is a lack of robust replicable studies to support the evidence regarding the effectiveness of MBT, and as such, conclusions from this review must be drawn carefully. A lack of heterogeneity within the participant characteristics of the included studies, as a high majority were young females, also has implications concerning the generalizability of the studies overall findings.

Finally, the current review was looking at the effectiveness of MBT interventions across all diagnostic domains; however the review did not explore the active ingredients within each intervention study to identify the mechanisms of change that were responsible for the MBTs effectiveness.

Recommendations & Conclusions

As a result of this review a number of recommendations can be made that will enhance the future research into the effectiveness of MBT across diagnoses. Firstly, further more robust, randomised, control trials examining the effectiveness of MBT are needed, particularly studies carried out by independent researchers without a vested interest in the outcomes. Secondly, while it was always going to prove difficult to synthesise the outcomes of MBT across multiple diagnosis/presentations, more consensus on the measures that best reflect an improvement in mentalizing would greatly help to produce more conclusive findings. In addition, larger sample sizes would also help to strengthen effect sizes and possibly lead to more conclusive findings, as well as more diverse samples, which would allow for greater generalizability of results.

Given the findings regarding the application of MBT across multiple diagnostic presentations future studies should consider the wider application of MBT not only to other mental health psychopathologies but to other situations including its potential use as a model for reflective practice and training with mental health care staff. Ensink, Maheux, Normandin, Sabourin, Diguier, Berthelot & Parent (2013) found that brief mentalization training improved the reflective functioning of novice therapists and helped to develop their mentalization capacities with challenging patients.

Finally, in order for future studies to produce robust reliable and valid results, and for reviewers to make well-informed decisions regarding the aspects of the study quality, which can have an impact upon the results, the risk of bias domains outlined by The Cochrane Collaboration (2008) should be taken into consideration in the early planning and implementation stages and be clearly reported in the final published paper.

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CHAPTER TWO

MAJOR RESEARCH PROJECT

Exploring metacognition in the narratives of therapeutic ruptures with staff within forensic mental health

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Lay Summary

Background: The skill of being attuned to other people's intentions, beliefs, thoughts and desires and as a result be able to explain their behaviours is referred to as 'Metacognition'. Metacognitive abilities are promoted by the quality of our early relationships especially those with our parents. Forensic mental health staff can be exposed to difficult and potentially threatening situations as a result of their patients' complex background and presentation. This can lead to heightened emotional distress and behaviour that staff can experience as unpredictable and difficult to understand. Such situations may impact staff's level of metacognition and their ability to support continued recovery.

Aims of the Study: The study was exploratory and aimed to investigate if there was a difference in the level of observed Metacognition in reflecting on two challenging interpersonal scenarios both involving a rupture in the therapeutic relationship. Both were drawn from participants' own experiences and one scenario was resolved (resulting in a positive outcome where the staff member was able to continue to work with patient) the other unresolved (a more negative outcome where the staff member has struggled to continue to work with the patient).

What the study involved: The study consisted of a series of interviews which were carefully transcribed. These transcripts were then coded for metacognition and attributions (how staff thought about the causes of therapeutic ruptures). Staff also completed a measure of ward atmosphere and staff burnout (a form of occupational stress).

Results: The results found that there was significantly lower metacognition when reflecting on the unresolved interpersonal interaction than the resolved interpersonal interaction. Better metacognition was associated with better ward atmosphere. There was no association with burnout. Most attributions made by staff were related to the patient being the cause of the situation described and the staff member being the target.

Conclusion: These findings merit further investigation using improved and more rigorous methods and may have implications for developing methods to support staff reflecting on unresolved therapeutic ruptures.

Scientific Abstract

Introduction: It has been argued that a capacity for metacognition in relation to others could be a key underpinning quality required in a mental health worker to develop positive therapeutic relationships. It is likely that forensic mental health staff are exposed to difficult and potentially threatening situations as a result of their patients' complex backgrounds and risk.

Aims: The study aimed to pilot and develop a methodology to explore and code metacognition and causal attributions in the context of staff reflecting on their experiences of resolved and unresolved therapeutic ruptures. In addition the study sought to explore associations between metacognition and measures of ward atmosphere and staff burnout.

Methods: Twenty members of staff working within a medium secure forensic mental health service volunteered to participate in the study. Participants were asked to recall two experiences where there had been a rupture in the therapeutic relationship, one where the situation had been resolved, and one where it was unresolved. Participants also completed the Ward Atmosphere Scale (WAS) and the Maslach Burnout Inventory (MBI). Interviews were transcribed and coded using the Metacognitive Assessment Scale (MAS) and the Leeds Attributional Coding System (LACS).

Results: Analysis of the MAS found that participants had significantly lower levels of metacognition for the unresolved situation than the resolved situation. Positive correlations were found between overall MAS scores and three of the WAS subscales. The majority of attributions made were where the patient was the Agent/Cause and the staff-member/speaker was the Target.

Discussion & Conclusion: We were able to identify changes in metacognition across different experiences of ruptures in the therapeutic relationship. These findings have implications regarding the suggestion of further research on a larger scale with improved methodology. These studies may prove useful in developing methods to enhance staff metacognition in response to therapeutic ruptures.

Introduction

Killaspy, Harden, Holloway and King (2005) provide a contemporary definition of the recovery focused approach within mental health services: “*A whole systems approach to recovery from mental illness that maximizes an individual’s quality of life and social inclusion by encouraging their skills, promoting independence and autonomy in order to give them hope for the future and leads to successful community living through appropriate support*” (p. 163). Yet, implementing such a recovery focused approach within forensic mental health settings has been described as challenging as staff have to balance their responsibilities to the public (risk of harm to others) with their clinical and therapeutic responsibilities which may include promoting patient autonomy, choice and recovery (Paden, 2010). However, despite this, training and awareness around this approach has supported forensic mental health services to change and develop a more recovery-focused approach (Drennan & Alred, 2012). The importance of secure attachment relationships between staff and patients is thought to be an integral part of this recovery-focused approach (Adshead, 2001).

In order for forensic mental health patients to develop secure attachment relationships with staff a strong therapeutic alliance or relationship needs to be established (Goldman & Anderson, 2007). Previous research has demonstrated a link between patterns of attachment and therapeutic alliance. Stronger therapeutic alliances were formed where patients felt they could depend upon their therapist (Satterfield & Lyddon, 1995 & Kivlighan, Patton, & Foote 1998). Yet a number of factors can provide direct challenges to the development of a therapeutic alliance, especially within a forensic mental health setting. These can include patient factors such as level of risk, attachment and relationship difficulties and trauma. They can also include staff factors such as staff’s capacity for mentalization (the ability to make sense of and interpret both our own behaviour and the behaviour of others in terms of intentional mental states, Allen, Fonagy & Bateman, 2008) and staff’s causal attributions (Leggett & Silvester, 2003).

Patient Factors

Attachment theory was initially grounded in the observation that human beings appear to be born with an innate psychobiological system (the attachment behavioural system) that motivates them to seek proximity to significant others (attachment figures) in times of need as a way of protecting themselves from threats and alleviating distress (Bowlby, 1982). The first set of competences are related to the provision of a safe haven in response to another's distress during times of threat and serves as an interpersonal context for the regulation of distress and suffering through the reciprocal soothing responses of a caregiver. Secure caregivers are those individuals who are able to effectively restore another's felt security when it is needed – by facilitating problem resolution and alleviating distress (Feeny, 2004). Therefore, and importantly, safe haven includes the sensitivity and attunement to distress, responsiveness to the other's needs and flexibility in responding to the attachment needs of another. A second and interconnected set of competences are related to the development of a secure base, which is the type of support that facilitates another's exploratory behaviour. Bowlby (1982) described a central role of caregiving as that of providing a secure base from which an attached person can “make sorties into the outside world” (p. 11), knowing that he or she can return for comfort, reassurance and/or assistance should difficulties be encountered along the way. In this sense, the secure base involves supporting an individual's personal growth, explorations and discoveries when the attachment system is not activated (Feeney & Brooke, 2004). More than this, qualities of exploration, trust, curiosity and autonomy remain important when the attachment system is activated. It has become well recognised that staff-patient relationships contain these key characteristics (Dozier, 1990) where the care-giving system (the reciprocal of the attachment system) functions to regulate flexible sensitivity to distress (safe haven) alongside concern for growth, autonomy and development (secure base). Arguably, in a forensic mental health context, the caregiving system has additional demands required by the balance between meeting the attachment needs of service users with the safety needs of the wider public. It may be possible to suggest

that the patient's level of risk affects the development of the therapeutic alliance through felt attachment security (Adshead, 2002).

Patients presenting with complex forensic mental health problems often have backgrounds that are characterised by trauma and disorganised attachment (Aiyegbusi, 2004 & Varese, Smeets, Drukker, Lievers, Lastaster, Viechtbauer, Read, Van Os & Bentall, 2012). Such disruptions in early attachment can have detrimental effects impacting upon the individuals' capacity to utilize information regarding their own and others' mental states in order to solve interpersonal problems (Fonagy, 1998). It is possible that these experiences undermine capacities to form secure working relationships with staff. Gumley, Taylor, Schwannauer and MacBeth (2014) carried out a review investigating attachment amongst individuals with psychosis and found small to moderate associations between greater attachment insecurity and poorer engagement with services, more interpersonal problems, more avoidant coping strategies, more negative appraisals of parenting experiences and more severe trauma. They proposed that attachment theory could be a useful means of understanding the developmental and interpersonal basis of recovery within the context of psychosis. Therefore attachment difficulties experienced by patients can result in potential barriers to the development of the therapeutic relationship leading to difficult clinical situations that could challenge staff's own capacity to manage and maintain difficult and complex affects.

Staff Factors

It is thought that the staff who care for individuals with long-term complex psychological and interpersonal difficulties will be profoundly influenced by their contact with such patients and often in an unconscious manner (Casement, 1991; Winnicott, 1949). Cox (1996) has also argued that staff who work within the forensic field are often exposed to particularly intense emotional experiences associated with the patient's mental ill health and offence history. It is possible that such exposure can have an impact upon staff's attitudes, beliefs and assumptions towards the patient, and this

may further impact upon the development of the therapeutic relationship (Aiyegbusi, 2004).

Staff's appraisal of a situation where a rupture in the therapeutic relationship has occurred could have an impact upon important patient outcomes. For example, Berry, Barrowclough and Haddock (2010) conducted a review of the literature to assess whether the concept of expressed emotion (EE) was a useful and valid measure of the quality of the professional caregiver and patient relationships. They found relatively consistent evidence of associations between staff criticism and poorer patient social functioning. They proposed that staff attributions might play a key role in driving such critical responses. Berry, Gregg, Vasconcelos, Haddock and Barrowclough (2012) then went on to investigate the role of staff attributions in staff – patient relationships in outcomes in schizophrenia. They found that in staff – patient dyads with positive relationships, staff were less likely to attribute patient's problems as being within their control than those dyads with neutral relationships. These findings were consistent with previous studies that demonstrated associations between attributions and relationship quality (Barrowclough, Lobban, Hatton & Quinn, 2001 & Weisman, Lopez, Karno & Jenkins, 1993). Leggett and Silvester (2003) found that seclusion following a violent incident was associated with controllable attributions for the patient and uncontrollable attributions for the care staff and that the use of medication was associated with uncontrollable attributions for the patient. Barrowclough, Haddock, Lowens, Connor, Pidliswyj and Tracey (2001) found that staff in a low secure forensic unit tended to make attributions about symptoms, aggression and interpersonal problems. Attributions made to internal (patient) and stable causes were associated with higher expressed emotion (criticism). Staff negativity towards patients was associated with internal personal (to patient) attributions.

It has also been argued that the ability to reflect, empathize and demonstrate a capacity for metacognition (mentalization) in relation to others are the key underpinning qualities required to develop positive therapeutic relationships (Stedmon & Dallos, 2009). Yet to do this the staff member

would be required to think about the pain, suffering and disempowerment of the victim in the patient, as well as the way in which others have been affected by the patient (Aiyegbusi, 2004). An ability to hold such different perspectives in mind would arguably require a high level of metacognitive ability.

The impact of attachment upon the patient's ability to form and maintain a secure relationship in adulthood, via the use of metacognition, has already been explored, however, the same principles apply to mental health staff. Research into the relevance of attachment on the therapeutic relationship has demonstrated some findings that support the view that the success of a therapeutic intervention is influenced by the therapist's own attachment style. Therapeutic benefit is associated with more secure attachment styles and more coherence of thought and language in the therapist (Dozier & Tyrrell, 1998; Rubino, Barker, Roth & Fearon, 2000).

Ruptures within the therapeutic relationship can elicit feelings of despair and hopelessness within mental health staff and can result in difficulties with maintaining a helpful presence with the patient (Aiyegbusi, 2004). Given such an emotional impact upon forensic mental health staff regarding the management of therapeutic relationships with patients with complex presentations, service provision needs to ensure a secure base for staff to enable them to manage such challenges (Aiyegbusi, 2004). Kurtz and Turner (2007) have proposed that if the feelings that are elicited by mental health work are not addressed staff will ultimately develop defensive attitudes and practices that will obstruct the therapeutic work.

Therapeutic ruptures: effects on metacognition and causal attributions

The term 'metacognition' similar to the terms 'mindreading', 'theory of mind' and 'mentalizing' all refer to a person's general ability to think about thinking, both their own and others thinking (Brune, 2005; Frith, 1992; Semerari, Carcione, Dimaggio, Falcone, Nicolò, Procacci, & Alleva, 2003). Lysaker, Buck and Hamm (2011) go on to describe synthetic metacognition as a way in which we as human beings synthesise knowledge regarding our

own and others intentional mental states such as beliefs, desires, feelings and purposes and how they influence our behaviour. These skills enable us to have a decentred view of the world and facilitates effective problem solving during interpersonal conflict and stress through a sub-function of metacognition described as mastery. Mentalizing involves many similar processes to metacognition, however, it does not include the mastery sub-function. Moreover, according to its proponents, mentalizing is disrupted mostly, if not only, in the context of the activation of the attachment system an assumption that metacognitive research does not share. Despite these differences there is considerable overlap with regard to the clinical processes and implications of metacognition and mentalization (Dimaggio & Lysaker, 2015). As such metacognition derived from narratives may provide the ideal context to explore mental health staff reflecting upon ruptures in therapeutic engagement and alliance.

According to Liotti and Gilbert (2011) the construct of metacognition (or mentalization as they describe it) unfolds in the context of different motivational states. In the context of caring, metacognition is generated by the attunement to the mental states such as needs, desires, feelings, beliefs, goals, purposes and reasons of the person being cared for (Lysaker, Buck & Hamm, 2011). Allowing ones own beliefs and attitudes to align with the patient is key to the caring role of the staff. Threats to this caring mentality can occur from feelings of fear, anxiety, shame and helplessness (Liotti & Gilbert, 2011). It maybe that therapeutic ruptures are experienced as difficult/threatening to staff. Arguably care staff may increase metacognition to help make sense of the rupture and identify sources within themselves or the other that can support the resolving of the rupture. On the other hand, negative affect may reduce the level of metacognition as a result of the stressful aspects of the situation.

To our knowledge, to date, no one has explored metacognition in relation to staff reflecting on their experiences of therapeutic ruptures. Therefore this study sought to develop a methodology to undertake such a study by exploring care staff experience of ruptures in the therapeutic

relationship, contrasting therapeutic ruptures that staff felt were resolved with ones that staff felt remained unresolved. In exploring the level of metacognition in the narratives the study sought to explore whether metacognition correlated with ward milieu and level of staff burnout.

Finally in order to identify the way in which staff made sense of these experiences we also explored causal attributions in the narrative, with particular emphasis on how staff portrayed service users and themselves throughout the discourse.

Aims & Research Questions

This study aims to pilot and develop a methodology to explore and code metacognition and causal attributions in the context of staff reflecting on their experiences of resolved and unresolved therapeutic ruptures. In addition the study sought to explore associations between metacognition and measures of ward atmosphere and staff burnout. Specific questions were:

1. Are there any differences between the levels of metacognition when reflecting on a resolved and on an unresolved therapeutic rupture?
2. What is the association between metacognition and ward atmosphere?
3. What is the association between metacognition and self reported burnout?
4. What are the characteristics of staff attributions during these reflections?

Methods

Design

This study was an exploratory repeated measures design to elicit metacognition and causal attributions on experiences of resolved and unresolved therapeutic ruptures. The independent variable under manipulation was clinical situation, either a resolved outcome or an unresolved outcome following a rupture in the therapeutic relationship. The dependent variable that was measured was level of metacognition, causal attributions and ward atmosphere and burnout levels.

Participants

Inclusion & Exclusion criteria: Individuals were included if they were forensic mental health staff working directly with patients in a Medium Secure Psychiatric Hospital. This included Psychologists, Psychiatrists, Occupational Therapists and Qualified and Unqualified Nursing Staff. Staff were included if they had worked in their post or a similar post for at least one year. There was no age restriction for participants being recruited to the study. Participants all had to be fluent in verbal and written English because of the need to rate audiotapes and the completion of written questionnaires.

Measures

Stage 1 Interview Development:

The Attributions and Metacognitive Interview (See Appendix 4 for a copy of the semi-structured interview schedule) was designed to elicit reflections from participants upon two ruptures in the therapeutic relationship, one resolved the other unresolved. The questions that were devised for the interview were aimed at eliciting metacognition at each of the four sub levels described by Lysaker, Buck and Hamm (2011) in the Metacognitive Assessment Scale. The questions were also based upon the Indiana Psychiatric Illness Interview (IPII; Lysaker, Clements, Plascak-Hallberg, Knipscheer, & Wright, 2002) an interview that was devised to elicit patients' narratives regarding their experience of psychosis and to code the narrative

for metacognition using the Metacognitive Assessment Scale.

Stage 2 Coding of Interview:

The Metacognitive Assessment Scale (MAS; Abbreviated Version V8, Lysaker, Buck & Hamm, 2011) is a tool that can be applied to narratives to measure individual's metacognitive abilities. It is comprised of four separate subscales that provide measures of the subfunctions within metacognition, these are: Understanding of One's Own Mind – Self Reflectivity, Understanding of Other's Mind, Decentration and Mastery. Through analysis of the interview content the rater awards points in relation to the level of metacognition that is achieved. These points are built up in order to provide a metacognitive profile of the individual and can be summed together to provide a total score of metacognitive ability. A number of studies conducted by Lysaker et al (Lysaker, Dimaggio, Carcione, Procacci, Buck, Davis & Nicolo, 2010; Lysaker, Dimaggio, Daroyanni, Buck, LaRocco, Carcione & Nicolò 2010; Lysaker, Ringer, Buck, Grant, Olesek, Leudtke & Dimaggio 2012; and Lysaker Warman, Dimaggio, Procacci, LaRocco, Clark, Dike, & Nicolò, 2008) have all produced acceptable to excellent levels of inter-rater reliability when using the MAS. Lysaker et al (2008) found significant interclass correlations for all of the MAS sub scales. Ranging from $r = 0.61$ ($p < 0.5$) to $r = 0.93$ ($p < 0.0001$) for the total score. They also found that when these scores were retested over a period of one year there was a significant degree of test-retest stability. The researcher was trained in the use of the MAS following existing guidelines (Lysaker et al., 2011) and through calibration sessions with a fellow Researcher and Research Supervisor where Paul Lysaker also provided training support. Following this a 'good' level of coding agreement was achieved for the training level where Cohen's kappa coefficient $\kappa = 0.7$, $p < 0.001$.

The Leeds Attributional Coding System (LACS) (Stratton, Mutton, Hanks, Heard, & Davidson, 1988) allows attributional statements to be extracted from interview transcripts that can then be coded by Speaker, Agent/Cause and Target in order to obtain a range of measures regarding

staffs' attributional style and level of criticism regarding the patients that they discuss during the interview. The attributions are coded on five dimensions. Full definitions and coding guidelines are provided in the LACS manual (Stratton, Mutton, Hanks, Heard, Davidson, 1988) (summary definitions are available in appendix 7 along with example attributions taken from the transcripts). The LACS has been used extensively in research to code spontaneous attributions (Stratton et al, 1988; Munton, Silvester, Stratton, & Hanks 1999; Grice, Kuipers, Bebbington, Dunn, Fowler, Freeman & Garety, 2009). The researcher was trained in the use of the LACS following the existing guidance (Stratton et al, 1988; Munton et al, 1999) and through discussion with her Research Supervisor.

Additional Measures

The Ward Atmosphere Scale (WAS; Moos & Houts, 1968) is a widely used measure with good reliability and validity for measuring a number of social aspects within an in-patient mental health setting (Moos, 1996). The WAS is a self-report questionnaire consisting of one hundred statements about the social climate within the clinical setting, which are individually rated as true or false. Statement examples include: *"Doctors do not explain what treatment is about to patients"*, *"There is very little emphasis on making plans for getting out of the program"*, *Staff are interested in learning about patients' feelings* and *"Patients are encouraged to learn new ways of doing things"*. It is split into ten subscales that produce three dimensions: relationship, personal growth and system maintenance. The relationship dimension reflects how active and energetic patients are, how supportive staff are and how much open expression of feelings is encouraged. The personal growth dimension looks at the extent to which patients learn practical skills and are prepared for release, as well as how much patients seek to understand themselves. The system maintenance dimension looks at the importance of order and organisation and how much patients know what to expect by way of rules and procedures. It also looks at the extent to which staff use measures to maintain control (Moos, 1996). Moos & Houts (1968) found that eight out of the ten subscales demonstrated adequate test-retest reliabilities when they developed the measure and stated that the two with lower scores

were likely to be the result of a lack of variability in individual scores. In the present study the overall Cronbach's alpha for the WAS subscales was $\alpha = 0.71$, 95% CI (0.49 – 0.87) where an alpha value between 0.70 and 0.90 is reported to be a 'Good' indicator of reliability (Kline, 2000).

The Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) is comprised of 22 items, respondents are asked to rate the frequency of experience of each item. Items are rated on a scale of '0' = never to '6' = every day. The items are divided into three subscales: Emotional Exhaustion (EE), Depersonalisation (DP), and Personal Accomplishment (PA), providing an overall measure for each. Example items include: *"I feel emotionally drained from my work"* (EE), *"I worry that this job is hardening me emotionally"* (DP) and *"I feel exhilarated after working closely with my recipients"* (PA). The higher the score on the EE subscale the higher the degree of burnout. High scores on the DP subscale reflect high burnout scores. A high degree of burnout is reflected in low scores on the PA subscale. The normative scores for the appropriate occupational subsample were used, i.e. mental health workers. The MBI has been used widely in a number of settings and has yielded good validity (Schaufeli, Leiter, & Kalimo, 1995; Leiter & Schaufeli, 1996) and reliability (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). Frith, McIntree, McKeown and Britton (1985) were also able to standardise the measure within a British nursing population.

Procedure

The research procedures were approved by the University of Glasgow, College of Medical, Veterinary and Life Sciences, College Ethics Committee (Ref: 200140003) and R&D Board approval (Ref: GN14CP416) was granted from NHS Greater Glasgow and Clyde (see appendices 8 and 9).

The Researcher contacted the appropriate levels of management within the NHS Greater Glasgow and Clyde's Forensic Mental Health and Learning Disability Directorate to seek approval to contact staff directly regarding recruitment to the study. The researcher sent participant

information sheets about the study to the various discipline managers inviting them to encourage staff to participate in the study. Staff then either contacted the researcher directly to arrange to take part in the study or a note of interest was sent via the discipline manager and the researcher contacted the staff member to arrange for them to take part in the study.

All participants were recruited from a 74-bed medium-secure forensic mental health unit. Information regarding the content of the interview was distributed to participants prior to completion of the interview (see appendix 5 for a copy of the participant information sheet). Informed consent was obtained from participants who agreed to take part in the study by asking them to sign a consent form (see appendix 6). Participants were informed that they could withdraw from the study at anytime.

In order to prevent any possible ordering effects participants were then randomly assigned to recall either a time when a rupture in the therapeutic relationship had resulted in a resolved outcome followed by a time when the outcome had been unresolved or vice versa. This was done using the Research Randomizer (<https://www.randomizer.org>) online tool. Participants were asked to complete some basic characteristics about themselves, including: age, gender, job title, level of qualification, length of time in current post, length of time in mental health services and frequency of formal supervision.

In order to set the scene and provide a dialogue that was then later used to support the coding of participant attributions, participants were asked to provide some general information about the patient they were going to discuss prior to answering the rest of the interview questions. Following completion of the interview participants then completed the WAS and MBI self report measures. All data was gathered on NHS premises whilst adhering to NHS data protection policies.

Data Analysis

Data were analysed using IBM SPSS version 21. All variables were checked for normality using both the Kolmogorov-Smirnov (K-S) test and a One sample t-test. The data failed to meet parametric assumptions. Descriptive statistics for participants and scores were calculated. Significant differences in median scores for the resolved MAS and unresolved MAS (both subscales and total scores) were examined using Wilcoxon signed-rank tests. Inter-rater reliability was examined for both the MAS coding and the LACS using Cohen's Kappa Coefficient (Cohen, 1960). The internal consistency of the WAS subscales was calculated using Cronbach's Alpha. Relationships between the total MAS score (the highest level achieved) and the MBI and WAS were examined using Spearman correlations. The attributions extracted and coded as per the LACS manual were analysed for descriptive statistics. Attributions where the patient was identified as the agent and the speaker/staff was identified as the target were selected (as this pattern was most common $n = 340$, 65.6 %). Chi Squared analysis was used to explore differences between resolved and unresolved attributions. Some of the cell sizes were small (≤ 5) in such cases Fishers Exact analysis was used in place of the Chi Squared analysis.

Results

Twenty members of staff working within a medium secure forensic mental health service volunteered to participate in the study. Demographic characteristics regarding the participants can be viewed in Table 1. The mean age of the participants was 33.25 years (SD = 7.91), they were prominently female (n = 70%), the majority of the participants were members of the nursing team, but the sample also included Clinical Psychology, Occupational Therapy and Psychiatry. The majority of the participants were educated to Degree level. The average length of time in current post was 3.98 years (SD = 3.12) and the average length of time working in mental health services was 9.52 years (SD = 7.46). Most of the participants received formal supervision on a monthly basis however there were three participants who received formal supervision less than yearly.

Inter-rater Reliability

Fifteen percent (n = 3) of the interviews were randomly selected and coded using the MAS by another researcher (AG). Cohen's kappa coefficient (κ) was used to calculate the level of agreement, regarding the MAS total and subscale scores, total MAS score was calculated as $\kappa = 0.88$, $p < 0.001$ indicating a good level of inter-rater reliability for the coding of total MAS. The Self Reflectivity subscale was calculated as $\kappa = 0.82$, $p < 0.001$, the Understanding Others subscale was calculated as $\kappa = 0.76$, $p = 0.008$, the Decentration subscale was calculated as $\kappa = 0.77$, $p = 0.002$ and the Mastery subscale was calculated as $\kappa = 1.00$, $p < 0.001$ indicating good to very good levels of inter-rater reliability across all of the MAS subscales.

Ten percent (n = 52) of the extracted attributions were randomly selected and coded according to the LACS manual by another researcher (AG). Cohen's kappa coefficient (κ) was used to calculate the level of agreement, regarding the coding of the attributions, and was calculated as $\kappa = 0.9$, $p < 0.001$ indicating a very good level of inter-rater reliability for the coding of attributions.

Table 1
Demographic Characteristics of Participants

Characteristics	Mean (SD) / Frequency (%) N = 20
Age: M (SD)	33.25 (7.91)
Gender: n (%)	
Male	6 (30%)
Female	14 (70%)
Job Title: n (%)	
Nursing Assistant	6 (30%)
Staff Nurse	4 (20%)
Charge Nurse	3 (15%)
Ward Manager	1 (5%)
Assistant Psychologist	2 (10%)
Specialist Occupational Therapist	3 (15%)
Specialist Trainee Psychiatrist ST6	1 (5%)
Level of Qualification: n (%)	
No Qualification	6 (30%)
Diploma	1 (5%)
Degree	9 (45%)
Post Graduate Diploma	1 (5%)
Masters Degree	2 (10%)
Doctorate	1 (5%)
Length of Time in Current Post (Years): M (SD)	3.98 (3.12)
Length of Time in Mental Health Services (Years): M (SD)	9.52 (7.46)
Frequency of Formal Supervision: M (SD)	
Weekly	2 (10%)
Fortnightly	1 (5%)
Monthly	6 (30%)
2 Monthly	3 (15%)
3 Monthly	3 (15%)
Yearly	2 (10%)
Less than yearly	3 (15%)

M = mean, SD = standard deviation, ST6 = Specialist Training in Psychiatry – year 6.

Metacognition

Metacognitive Assessment Scale (MAS) scores are summarised in Table 2. Examples of transcript text highlighting the differences in attributions and metacognition can be seen in Appendix 7. The data from the MAS failed to meet parametric assumptions, hence medians and interquartile ranges are reported along with Wilcoxon signed-rank tests of comparison. The overall MAS resolved Score (Mdn = 24.5, Interquartile Range 22.3 – 27, N = 20) was significantly higher than the overall MAS unresolved score (Mdn = 21.5, Interquartile Range 17.3 – 24.3, N = 20) where Wilcoxon signed-rank $T = 19.5$, $p = 0.01$, $r = 0.61$, demonstrating a large effect size for this finding.

All subscales within the MAS, with the exception of Self Reflectivity (Wilcoxon signed-rank $T = 68.5$, $p = 0.3$), also demonstrate significantly higher scores for the resolved situation compared to the unresolved situation: Understanding Others resolved (Wilcoxon signed-rank $T = 3.0$, $p = 0.02$, $r = 0.53$, indicating a large effect size); Decentration (Wilcoxon signed-rank $T = 5$, $p = 0.02$, $r = 0.52$, indicating a large effect size); Mastery (Wilcoxon signed-rank $T = 7$, $p = 0.008$, $r = 0.65$, again indicating a large effect size).

Table 2

Metacognitive Assessment Scale (MAS) descriptive statistics and non-parametric Wilcoxon signed-rank comparison results

Variable	MAS Resolved Scores		MAS Unresolved Scores		Wilcoxon	
	Parametric M (SD)	Non-parametric Mdn (IQR)	Parametric M (SD)	Non-parametric Mdn (IQR)	T (N)	p (r)
Self Reflectivity	7.4 (1.7)	8.0 (7 – 9)	6.8 (1.7)	7.0 (6 – 8)	68.5 (20)	0.30 (0.24)
Understanding Others	6.0 (0.9)	6.0 (5 – 7)	5.3 (1.3)	5.0 (5 – 6)	3.0 (20)	0.02 (0.53)
Decentration	2.6 (0.7)	3.0 (2 – 3)	2.2 (0.7)	2.0 (2 – 3)	5.0 (20)	0.02 (0.52)
Mastery	8.3 (1.1)	8.5 (8 – 9)	6.8 (1.9)	7.5 (5 – 8)	7.0 (20)	0.01 (0.65)
Total	24.2 (3.4)	24.5 (22.3 – 27)	21.1 (4.0)	21.5 (17.3 – 24.3)	19.5 (20)	0.01 (0.61)

M = Mean, SD = Standard Deviation, Mdn = Median, IQR = Interquartile Range, T = Wilcoxon test statistic,
N = number of participants, p = level of statistical significance, r = effect size.

Measures of Ward Atmosphere and Burnout

A summary of the means and standard deviations and medians and interquartile ranges for the Ward Atmosphere Scale (WAS) subscale scores and Maslach Burnout Inventory (MBI) subscale scores can be seen in Table 3.

Table 3

Ward Atmosphere Scale (WAS) and Maslach Burnout Inventory (MBI) subscale scores.

Ward Atmosphere Scale (WAS) Subscales	Number of Items	Parametric M (SD)	Non Parametric Mdn (IQR)	
<i>Relationship Dimension</i>				
Involvement (I)	10	5.0 (1.8)	5.0 (3.3 - 6.0)	
Support (S)	10	6.8 (1.7)	7.0 (6.0 – 8.0)	
Spontaneity (SP)	9	5.0 (1.4)	5.0 (4.0 – 6.0)	
<i>Personal Growth Dimension</i>				
Autonomy (A)	10	4.6 (1.2)	5.0 (4.0 – 5.0)	
Practical Orientation (PO)	10	7.5 (1.9)	8.0 (7.3 – 8.8)	
Personal Problems Orientation (PPO)	9	4.9 (1.5)	5.0 (4.0 – 6.0)	
Anger and Aggression (AA)	9	6.2 (1.5)	6.5 (5.0 – 7.8)	
<i>System Maintenance Dimension</i>				
Order and Organization (OO)	10	6.0 (2.4)	5.5 (4.0 – 8.0)	
Program Clarity (PC)	10	7.7 (2.1)	8.0 (6.0 – 9.0)	
Staff Control (SC)	10	4.0 (1.6)	3.5 (3.0 – 5.0)	
Maslach Burnout Inventory (MBI) Subscales				Normative category
Emotional Exhaustion (EE)	9	18.5 (9.2)	16.5 (13.3 – 23.8)	Medium (14 -20)
Depersonalisation (DP)	5	5.0 (3.5)	4.0 (2.0 – 7.8)	Medium (5 – 7)
Personal Accomplishment (PA)	8	37.4 (5.9)	36.5 (32.5 – 43.8)	Low (>34)

M = Mean, SD = Standard Deviation, Mdn = Median, IQR = Interquartile Range.

Relationships between MAS scores and MBI & WAS Scores

There were no significant correlations between overall MAS score (overall MAS score consisted of taking the highest rating for each MAS subscale across the resolved and unresolved situation for each participant and summing them together to provide an overall MAS score for the participant) and the MBI subscales. Overall MAS score was significantly positively correlated with the WAS Involvement subscale ($r_s = 0.45$, $p = 0.05$); WAS Spontaneity subscale ($r_s = 0.52$, $p = 0.01$) and the WAS Autonomy subscale ($r_s = 0.53$, $p = 0.02$). These findings suggest that higher metacognition is associated with better ward atmosphere in terms of involvement, spontaneity and autonomy.

Attributions

A total number of 519 attributions were identified and extracted from the interview transcripts in line with the Leeds Attributional Coding System (LACS). A total of 262 attributions were made for the resolved situation and a total of 257 attributions were made for the unresolved situation. Table 4 provides a summary of the frequency and percentages of attributions made for each different Agent/Cause and Target. The majority of attributions made were where the patient is the Agent/Cause 386 (74.4%) and where the staff member/speaker is the Target 377 (72.6%).

These attributions were most likely to be coded as *stable* in that the staff member appraised the situation as likely to continue to influence outcomes in the future. They were more likely to be coded as *global* in that the causal element is likely to impact upon several different outcomes. They were more likely to be coded as *external* to themselves but *internal* to the patients, in that they believed that the cause originated from within the patient. They were more likely to be coded as *universal* to themselves in that no aspect of the link between the cause or the outcome was distinctive to them but, that it was to the patient, rating it as *personal* to the patient. Finally these attributions were more likely to be coded as *uncontrollable* to the staff member but *controllable* to the

patient, in that staff members believed that the patient had control over the outcome but that they did not.

These attributions were selected and further analysis was carried out to explore differences between resolved attributions and unresolved Attributions (Table 5).

Table 4*Leeds Attributional Coding System (LACS) Descriptive Statistics*

Variable		Total Attributions (n = 519)	Total Resolved Attributions (n = 262)	Total Unresolved Attributions (n = 257)
Agent/Cause n (%)				
	Treatment	9 (1.7%)	6 (2.3%)	3 (1.2%)
	Patient Symptoms	21 (4.0%)	11 (4.2%)	10 (3.9%)
	Patient Behaviour	386 (74.4%)	183 (69.8%)	203 (79.0%)
	Staff	100 (19.3%)	61 (23.4%)	39 (15.1%)
	Peers	-	-	-
	Staff & Peers	-	-	-
	Patient's Family	2 (0.4%)	-	2 (0.8%)
	Other Professionals	1 (0.2%)	1 (0.4%)	-
Target n (%)				
	Treatment	17 (3.3%)	9 (3.4%)	8 (3.1%)
	Patient Symptoms	5 (1.0%)	3 (1.1%)	2 (0.8%)
	Patient Behaviour	95 (18.3%)	64 (24.4%)	31 (12.1%)
	Staff	377 (72.6%)	173 (66.1%)	204 (79.4%)
	Peers	14 (2.7%)	9 (3.4%)	5 (1.9%)
	Staff & Peers	11 (2.1%)	4 (1.5%)	7 (2.7%)
	Patient's Family	-	-	-
	Other Professionals	-	-	-

Table 5 provides a summary of the differences between resolved and unresolved Scores for selected attributions where Agent/Cause = patient and Target = staff, across all of the coding dimensions. These results must be interpreted with caution given such low cell counts for some of the coding dimensions. Table 6 shows the pattern of attributions across the two conditions. We adopted a more conservative $p < 0.01$ to adjust for multiple testing. We found no significant differences between the two conditions however we noted that the results would have been marginally significant for the Controllable/Uncontrollable (Speaker/Target) dimension at the unadjusted significance level where $\chi^2 (1) = 3.99$, $p = 0.05$. We also noted the very low counts in the cells where this difference was located.

Table 5

Leeds Attributional Coding System (LACS) differences between resolved and unresolved Scores for selected attributions where Agent/Cause = patient and Target = Staff.

Variable	Total Attributions (n = 340)	Total Resolved Attributions (n = 160)	Total Unresolved Attributions (n = 180)	Difference χ^2 (p)
Stable	325	153	172	0.001 (0.98)
Unstable	15	7	8	
Global	326	154	172	0.103 (0.75)
Specific	14	6	8	
Internal	335	0	5	- (0.06)
External	5	160	175	
(Speaker/Target)				
Internal	334	158	176	- (0.68)
External	6	2	4	
(Agent)				
Personal	9	3	6	- (0.51)
Universal	331	157	174	
(Speaker/Target)				
Personal	332	158	174	- (0.29)
Universal	8	2	6	
(Agent)				
Controllable	24	16	8	3.985 (0.05)
Uncontrollable	316	144	172	
(Speaker/Target)				
Controllable	299	136	163	2.465 (0.12)
Uncontrollable	41	24	17	
(Agent)				

χ^2 = Chi Squared value, n = number of participants, p = level of statistical significance (where cell values are equal to or lower than 5 Fisher's Exact, two tailed, p values are reported, in line with Field, 2013, p. 723).

Discussion

This study aimed to explore any differences in metacognition across resolved and unresolved ruptures in the therapeutic relationship for staff working in a medium secure forensic mental health service. Given that the study methodology was exploratory the study also sought to investigate the reliability and validity of the methodology. Causal attributions were extracted and coded and assessment carried out to see if there was any difference in the quality of these across the resolved and unresolved ruptures in therapeutic relationship.

Metacognition

We were able to code the narrative transcripts for metacognition and found that staff scored in the moderate to high level (between 5 and 8) given the range of scores available (1 to 9). There are no norms for the MAS. However a previous study found that participants with forensic mental health problems scored on average between 1 and 3 on this measure (Mitchell, Gumley, Reilly, Macbeth, Lysaker, Carcione, & Dimaggio, 2011). The results also demonstrated that metacognition was significantly reduced for participants when they were reflecting on an unresolved rupture in the therapeutic relationship compared to a resolved rupture. This was found to be the case for overall Metacognitive Assessment Scale score and for the subscales: Understanding Others, Decentration and Mastery. Self Reflectivity however was not statistically significant between the situations.

Differences in overall level of metacognition were not associated with levels of stress and burnout, but were associated with better ward atmosphere. We did not make a prediction regarding the direction effect of the type of rupture in the therapeutic relationship on metacognition. We argued that it was equally possible that mental health staff may increase metacognition to help make sense of the rupture and identify sources within themselves or the other that can support the resolving of the rupture. Or on the other hand, negative affect may reduce the level of

metacognition as a result of the stressful aspects of the situation. This stance is different to that of Liotti and Gilbert (2011) who argued that metacognition (or mentalization) would reduce in response to negative affect or stress. It may be that we did not find an association between levels of metacognition and burnout because the MBI was not sensitive to the number of different therapeutic situations. Yet, we did find that increased metacognition was linked to improved ward atmosphere. It may be that interventions aimed at enhancing staffs' capacity to reflect on and utilise metacognition in response to therapeutic ruptures could improve the overall quality of engagement and therapeutic alliance. This could then in turn improve the quality of ward atmosphere.

Attributions

The process of extracting and coding causal attributions provided less clear results across resolved or unresolved ruptures in the therapeutic relationship. A clear pattern emerged where participants attributed the majority of actions as being caused by patients and directed towards staff as the target. This pattern was the same across the therapeutic rupture situations and it is clear that participants also tended to view these actions as stable, global, external to themselves but internal to the patient, universal to themselves but personal to the patient and uncontrollable to themselves but controllable to the patient. These findings are consistent with the findings of Leggett and Silvester (2003) and Barrowclough, Haddock, Lowens, Connor, Pidliswyj and Tracey (2001) who both found that staff attributions in response to difficult or challenging therapeutic situations were linked to a causal attribution style characterized as internal (patient) and stable and personal. The patterns of attributions observed in this study also closely resembled the patterns of attributions found in other studies where participants were reflecting on expressed emotion (Berry, Barrowclough & Haddock, 2010). We did not code for expressed emotion in the narratives and therefore we are unable to comment on the criticisms or warmth expressed within the narratives.

Attributions can be considered differently to metacognition. Metacognition arises in the context of an effortful reflective practice when individuals are asked to think about their own thinking with regards to the self and others in response to ruptures in the therapeutic relationship. In contrast attributions tend to be relatively effortless and spontaneously occurring. They occur automatically and it may be that these sets of attributions are less sensitive to different therapeutic situations involving similar patients.

Limitations

There were a number of limitations which impact the generalisability of the findings. First participants were members of staff who volunteered to participate in the study and therefore the findings are subject to selection bias. It is possible that participants may not have consisted of a representative sample of all forensic mental health staff. Secondly, we found differences in levels of Metacognition in relation to resolved and unresolved scenarios. However, the clinical significance of these findings are not fully understood. Although metacognition was associated with ward atmosphere we do not understand how this translates to patients' experiences and outcomes. Therefore future studies could address this question. Third, the fact that the researcher was not blind to the type of rupture in the therapeutic relationship when coding the transcripts means that there is a risk of observer bias. We tried to guard against this source of bias by making a specific bidirectional hypothesis regarding whether metacognition would be higher or lower in either scenario. Future research could employ independent and blind ratings of metacognition. Fourth, we aimed to characterise the patterns of attributions observed during staff reflections but we did not make any hypotheses about associations with metacognition. Finally we did not use a measure of therapeutic alliance and this would have been an interesting variable to explore in relation to metacognition.

Conclusion

This study demonstrated the feasibility of coding Metacognition from staff narratives and the findings suggested that metacognition may be sensitive to exploring therapeutic ruptures. In this way this study provides the basis for further research that could identify key mechanisms linked to the formation and maintenance of the therapeutic alliance during times of stress and conflict. It might be possible to consider whether emotional intelligence affects level of metacognition and what factors of metacognition are affected by unresolved ruptures in the therapeutic relationship.

Further research could explore the nature of the ruptures and what factors are more likely to lead to a resolved situation. In this study resolved situations tended to happen when participants were honest with the patients about the situation that had arisen. Future studies could investigate what factors participants attribute to a resolved rupture. Ruptures may also provide an important context to explore the resilience of these relationships and the extent to which the caregiving system can deploy to provide a safe haven and a secure base for recovery. Further exploration of the effects of negative staff attributions on the therapeutic relationship and the ability to engage in metacognition will also be an interesting area for future research to consider. Findings from this may help to inform staff support and training.

These findings have implications regarding the suggestion of further research on a larger scale with improved sampling and methodological coding of metacognition. Findings from such future studies could have an impact upon staff training and reflective practice groups to enhance staff metacognition. Ensink, Maheux, Normandin, Sabourin, Diguier, Berthelot and Parent (2013) have demonstrated that mentalization training significantly improved the reflective functioning of psychology therapists in training when working with patients with complex mental health difficulties. Findings from future studies may also inform individual supervision practices and therapeutic milieu development to

support staff in the management of conflicts with patients to enhance positive therapeutic relationships. The outcomes of which are more likely to lead to improved therapeutic engagement and patient recovery.

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CHAPTER THREE
ADVANCED CLINICAL PRACTICE 1
REFLECTIVE CRITICAL ACCOUNT
(Abstract Only)

**Reflections upon the challenges for a Trainee Clinical
Psychologist working with difficult personality
characteristics**

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Abstract

Clients who present with challenging personality characteristics such as borderline personality disorder (BPD) are often viewed as difficult to work with and studies have shown that the characteristics of individuals with BPD can often have negative effects upon the therapeutic process and on clinicians themselves. They also tend to have higher rates of drop out as well as unpredictable treatment outcomes (Cambanis, 2012). This reflective account considers the advancement of my skills within my clinical practice placements over the duration of my training. It will focus more specifically on my work with more complex and challenging cases where difficulties in client personality have made psychological therapeutic assessment and intervention more challenging. With reference to the Declarative, Procedural and Reflective Model of Therapist Skill Development (DPR; Bennett-Levy, 2006) I will draw upon experiences from my clinical practice placements to highlight the development of my interpersonal therapeutic skills with clients and how the more challenging cases have supported this development. I have used Gibbs (1988) Reflective Cycle to structure this account and have included this within the broad framework of The Integrated Developmental Model of Supervision (IDM, Stoltenberg, McNeill & Delworth, 1998). I reflect upon the processes that have guided my learning and consider goals for my future professional development.

CHAPTER FOUR
ADVANCED CLINICAL PRACTICE 2
REFLECTIVE CRITICAL ACCOUNT
(Abstract Only)

**Managing the Challenges of Multi Disciplinary Team
Working: Reflections of a Trainee Clinical Psychologist**

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Glasgow**

Abstract

Within this reflective account I discuss my experiences of working within multi-disciplinary team (MDT) environments. I go on to consider how these experiences have shaped and influenced the development of my professional values and identity as a Clinical Psychologist, taking into account the transition from Trainee to Qualified Clinical Psychologist. By drawing upon examples from my final year of clinical practice training, within a specialist Child and Adolescent Mental Health Service (CAMHS), I will discuss what I have experienced as challenges of MDT working. I reflect upon my personal reactions to these experiences and how these have impacted my continued professional development. I consider the multiple influences that have guided my learning and development throughout training and how these have led to changes in my thinking and supported the development of my identity as a Clinical Psychologist. Finally I consider the areas of strength and limitations within my clinical practice and how this outlines my personal learning goals in order to ensure continued improvement in my knowledge, competences and skills throughout my future career as a Clinical Psychologist.

APPENDICES

**Appendix 1: Summary of Author Guidelines for Submission to
*Psychology and Psychotherapy: Theory Research and Practice***

Psychology and Psychotherapy: Theory, Research and Practice

Author Guidelines

Psychology and Psychotherapy: Theory Research and Practice (formerly The British Journal of Medical Psychology) is an international scientific journal with a focus on the psychological aspects of mental health difficulties and well-being; and psychological problems and their psychological treatments. We welcome submissions from mental health professionals and researchers from all relevant professional backgrounds. The Journal welcomes submissions of original high quality empirical research and rigorous theoretical papers of any theoretical provenance provided they have a bearing upon vulnerability to, adjustment to, assessment of, and recovery (assisted or otherwise) from psychological disorders. Submission of systematic reviews and other research reports which support evidence-based practice are also welcomed, as are relevant high quality analogue studies. The Journal thus aims to promote theoretical and research developments in the understanding of cognitive and emotional factors in psychological disorders, interpersonal attitudes, behaviour and relationships, and psychological therapies (including both process and outcome research) where mental health is concerned. Clinical or case studies will not normally be considered except where they illustrate particularly unusual forms of psychopathology or innovative forms of therapy and meet scientific criteria through appropriate use of single case experimental designs.

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

All articles submitted to PAPT must adhere to the stated word limit for the particular article type. The journal operates a policy of returning any papers that are over this word limit to the authors. The word limit does not include the abstract, reference list, figures and tables. Appendices however are included in the word limit. The Editors retain discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length (e.g., a new theory or a new method). The authors should contact the Editors first in such a case.

Word limits for specific article types are as follows:

- Research articles: 5000 words
- Qualitative papers: 6000 words
- Review papers: 6000 words

Appendix 1: Continued

- Special Issue papers: 5000 words

3. Brief reports

These should be limited to 1000 words and may include research studies and theoretical, critical or review comments whose essential contribution can be made briefly. A summary of not more than 50 words should be provided.

4. Submission and reviewing

All manuscripts must be submitted via

<http://www.editorialmanager.com/paptrap/>. The Journal operates a policy of anonymous peer review. Before submitting, please read the [terms and conditions of submission](#) and the [declaration of competing interests](#).

5. Manuscript requirements

- Contributions must be typed in double spacing with wide margins. All sheets must be numbered.
- Manuscripts should be preceded by a title page which includes a full list of authors and their affiliations, as well as the corresponding author's contact details. A template can be downloaded [here](#).
- Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript with their approximate locations indicated in the text.
- Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi.
- For articles containing original scientific research, a structured abstract of up to 250 words should be included with the headings: Objectives, Design, Methods, Results, Conclusions. Review articles should use these headings: Purpose, Methods, Results, Conclusions.
- All Articles must include Practitioner Points – these are 2-4 bullet points, in addition to the abstract, with the heading 'Practitioner Points'. These should briefly and clearly outline the relevance of your research to professional practice.
- For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.
- SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.
- In normal circumstances, effect size should be incorporated.
- Authors are requested to avoid the use of sexist language.
- Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright.

Appendix 1: Continued

- Manuscripts describing clinical trials must be submitted in accordance with the CONSORT statement on reporting randomised controlled trials (<http://www.consort-statement.org>).
- Manuscripts describing systematic reviews and meta-analyses must be submitted in accordance with the PRISMA statement on reporting systematic reviews and meta-analyses (<http://www.prisma-statement.org>).

For guidelines on editorial style, please consult the [APA Publication Manual](#) published by the American Psychological Association.

6. Multiple or Linked submissions

Authors considering submitting two or more linked submissions should discuss this with the Editors in the first instance.

7. Supporting Information

PAPT is happy to accept articles with supporting information supplied for online only publication. This may include appendices, supplementary figures, sound files, videoclips etc. These will be posted on Wiley Online Library with the article. The print version will have a note indicating that extra material is available online. Please indicate clearly on submission which material is for online only publication. Please note that extra online only material is published as supplied by the author in the same file format and is not copyedited or typeset. Further information about this service can be found at <http://authorservices.wiley.com/bauthor/suppmat.asp>

8. Copyright and licenses

If your paper is accepted, the author identified as the formal corresponding author for the paper will receive an email prompting them to login into Author Services, where via the Wiley Author Licensing Service (WALS) they will be able to complete the license agreement on behalf of all authors on the paper.

For authors signing the copyright transfer agreement

If the OnlineOpen option is not selected the corresponding author will be presented with the copyright transfer agreement (CTA) to sign. The terms and conditions of the CTA can be previewed in the samples associated with the [Copyright FAQs](#).

For authors choosing OnlineOpen

If the OnlineOpen option is selected the corresponding author will have a choice of the following Creative Commons License Open Access Agreements (OAA):

- Creative Commons Attribution Non-Commercial License OAA
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To preview the terms and conditions of these open access agreements please visit the [Copyright FAQs](#) and you may also like to visit the [Wiley Open Access and Copyright Licence](#) page.

Appendix 1: Continued

If you select the OnlineOpen option and your research is funded by The Wellcome Trust and members of the Research Councils UK (RCUK) or Austrian Science Fund (FWF) you will be given the opportunity to publish your article under a CC-BY

license supporting you in complying with your Funder requirements. For more information on this policy and the Journal's compliant self-archiving policy please visit our [Funder Policy](#) page.

9. Colour illustrations

Colour illustrations can be accepted for publication online. These would be reproduced in greyscale in the print version. If authors would like these figures to be reproduced in colour in print at their expense they should request this by completing a Colour Work Agreement form upon acceptance of the paper. A copy of the Colour Work Agreement form can be downloaded [here](#).

10. Pre-submission English-language editing

Authors for whom English is a second language may choose to have their manuscript professionally edited before submission to improve the English. A list of independent suppliers of editing services can be found at http://authorservices.wiley.com/bauthor/english_language.asp. All services are paid for and arranged by the author, and use of one of these services does not guarantee acceptance or preference for publication.

11. OnlineOpen

OnlineOpen is available to authors of primary research articles who wish to make their article available to non-subscribers on publication, or whose funding agency requires grantees to archive the final version of their article. With OnlineOpen, the author, the author's funding agency, or the author's institution pays a fee to ensure that the article is made available to non-subscribers upon publication via Wiley Online Library, as well as deposited in the funding agency's preferred archive. For the full list of terms and conditions, see

http://wileyonlinelibrary.com/onlineopen#OnlineOpen_Terms

Any authors wishing to send their paper OnlineOpen will be required to complete the payment form available from our website at:

<https://onlinelibrary.wiley.com/onlineOpenOrder>

Prior to acceptance there is no requirement to inform an Editorial Office that you intend to publish your paper OnlineOpen if you do not wish to. All OnlineOpen articles are treated in the same way as any other article. They go through the journal's standard peer-review process and will be accepted or rejected based on their own merit.

12. Author Services

Author Services enables authors to track their article – once it has been accepted – through the production process to publication online and in

Appendix 1: Continued

print. Authors can check the status of their articles online and choose to receive automated e-mails at key stages of production. The author will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the

manuscript. Visit <http://authorservices.wiley.com/bauthor/> for more details on online production tracking and for a wealth of resources including FAQs and tips on article preparation, submission and more.

13. The Later Stages

The corresponding author will receive an email alert containing a link to a web site. A working e-mail address must therefore be provided for the corresponding author. The proof can be downloaded as a PDF (portable document format) file from this site. Acrobat Reader will be required in order to read this file. This software can be downloaded (free of charge) from the following web site:

<http://www.adobe.com/products/acrobat/readstep2.html>. This will enable the file to be opened, read on screen and annotated direct in the PDF.

Corrections can also be supplied by hard copy if preferred. Further instructions will be sent with the proof. Hard copy proofs will be posted if no e-mail address is available. Excessive changes made by the author in the proofs, excluding typesetting errors, will be charged separately.

14. Early View

Psychology and Psychotherapy is covered by the Early View service on Wiley Online Library. Early View articles are complete full-text articles published online in advance of their publication in a printed issue. Articles are therefore available as soon as they are ready, rather than having to wait for the next scheduled print issue. Early View articles are complete and final. They have been fully reviewed, revised and edited for publication, and the authors' final corrections have been incorporated. Because they are in final form, no changes can be made after online publication. The nature of Early View articles means that they do not yet have volume, issue or page numbers, so they cannot be cited in the traditional way. They are cited using their Digital Object Identifier (DOI) with no volume and issue or pagination information. E.g., Jones, A.B. (2010). Human rights Issues. *Human Rights Journal*. Advance online publication. doi:10.1111/j.1467-9299.2010.00300.x

Appendix 2: Summary of bias types

Type of bias	Description	Relevant domains in the Collaboration's 'Risk of bias' tool
Selection bias	Systematic differences between baseline characteristics of the groups that are compared.	<ul style="list-style-type: none">• Sequence generation.• Allocation concealment.
Performance bias	Systematic differences between groups in the care that is provided, or in exposure to factors other than the interventions of interest.	<ul style="list-style-type: none">• Blinding of participants and personnel.• Other potential threats to validity.
Detection bias	Systematic differences between groups in how outcomes are determined.	<ul style="list-style-type: none">• Blinding of outcome assessment.• Other potential threats to validity.
Attrition bias	Systematic differences between groups in withdrawals from a study.	<ul style="list-style-type: none">• Incomplete outcome data
Reporting bias	Systematic differences between reported and unreported findings.	<ul style="list-style-type: none">• Selective outcome reporting

Appendix 3: Secondary Outcome Measures Used in the Included Studies

Secondary Outcome Measures

Table 1 provides details of the various secondary outcome measures used in the included studies. A large number of secondary outcome measures were used, mainly consisting of self-report measures. The most commonly used measure was symptom distress, measured by the Symptom Checklist (SCL-90-R) which provides a Global Severity Index (GSI), five of the seven studies utilized this measure (Arnevik et al., 2009; Bateman & Fonagy, 1999; Bateman & Fonagy, 2009; Gullestad et al., 2013; & Jakobsen et al., 2014) while another (Sadler et al., 2013) calculated GSI from a different measure of symptom distress (Brief Symptom Inventory-Short Form, BSI). Social adjustment and interpersonal problems were both measured via the Social Adjustment Scale and the Inventory of Interpersonal Problems in the studies by Bateman and Fonagy (1999); Bateman and Fonagy (2009) and Jorgensen et al., (2013). The study by Arnevik et al., (2009) also measured personality problems via the Circumplex of Interpersonal Problems (CIP) and personality problems via The Severity Indices of Personality Problems (SIPP-118). Five of ten included studies (Arnevik et al., 2009; Bateman & Fonagy, 2008; Bateman & Fonagy, 2009; Gullestad et al., 2013 & Jorgensen et al., 2013) also employed the Global Assessment of Functioning (GAF) to measure psychosocial functioning. Three of the included studies also measured depression (Beck Depression Inventory, BDI) (Bateman & Fonagy, 1999; Bateman &

Fonagy, 2009; Jakobsen et al., 2014). The study by Bateman & Fonagy (1999) also measured state and trait anxiety (STAI).

Bateman & Fonagy's (2008) study measured symptom status via the Zannarini Rating Scale for The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). One of the studies also measured the proportion of participants in remission according to their HDRS score (<8) post treatment, along with wellbeing via the World Health Organization Wellbeing Index (WHO-5) (Jakobsen et al., 2014). Given the study carried out by Rossouw & Fonagy (2012) was concerned with adolescents, they used a variety of secondary outcome measures with normative data for this population including depression via the Mood and Feelings Questionnaire (MFQ), risk taking behaviour via the Risk-Taking (RT) and Self-Harm (SH) Inventory for Adolescents (RTSHI), a measure of borderline features via the Borderline Personality Features Scale for Children (BPFS-C), the How I Feel Questionnaire (HFQ), and the Experience of Close Relationships Inventory (ECR) to measure attachment. Finally the study conducted by Sadler et al., (2013) also measured Maternal Reflective Functioning via the Pregnancy Interview (PI) and the Parent Development Interview (PDI) as a secondary outcome measure (these measures were developed by the researchers).

Appendix 4: Interview Schedule

Interview Schedule (Version 1, 05/08/2014)

The Attributions and Metacognitive Interview

Verbatim statements and questions have been underlined, non underlined sections are prompts to consider throughout the interview

During this interview I would like to give you the opportunity to talk about how you respond during difficult clinical situations with patients.

For example where a patient has had a dispute with you regarding their recovery/therapeutic process where they have left you feeling quite strong emotions such as feeling a dislike towards the patient, or feelings of inadequacy around your role, or hurt and upset or even hopelessness.

I would like you to think about two different clinical situations, one where the dispute has been resolved leading to a positive outcome and one where the dispute has remained unresolved.

I understand that some of the experiences that I am asking you about may be difficult to discuss. Therefore you do not have to tell me about the most distressing clinical situations you have had, but I would like to hear about experiences that have challenged you and have made work with that patient difficult.

Do you have two situations in mind to discuss?

In line with randomisation the participant will either be asked to start with the positively resolved outcome or the unresolved outcome.

In order to set the scene it would be helpful for me to hear a bit about the patient, what their main difficulties or diagnosis is, how this impacts upon your work with them, what kind of person they are and how you generally get on together.

It is best if you do this without many interruptions from me once you have set the scene for me I will then ask some more specific questions relating to the dispute and outcome with the patient.

Before we start do you have any questions about the interview?

1a). OK let's begin with the first patient:

- What's their main difficulties or diagnosis

- How does this impact upon your work with them
- What kind of person are they
- How you generally get on together.

Appendix 4: Continued

1b). Thank you, can you now tell me about the dispute you had with this patient

- **1c). understanding own mind and mental stats during the dispute reflection upon this**
 - **States:** needs, desires, feelings, beliefs, goals, purposes & reasons
 - How did this make you feel
 - What impact did this have on your own thoughts and actions
 - What did you do/how did you respond at the time
- **1d). understanding and the ability to reflect upon the mental states of others**
 - What do you think the patient was feeling/thinking at the time
 - Why do you think they said/did that
- **1e). how you used this information to manage the situation (Decenration and Mastery)**
 - How has this experience influenced your work with X
 - Has this impacted upon they way you work with other patients
 - Do you do anything differently now following this experience
 - Reflecting upon the situation now is there anything you think you may have done differently

In line with randomisation the participant will then be asked to move onto either the resolved outcome or the unresolved outcome and asked the same questions.

Questions that can be used throughout to elicit further information:

- **I am interested to know more about that, can you tell me a bit more**
- **Could you give me an example of feeling/doing/thinking that**

Appendix 4: *Continued*

- I am wondering what makes you say that
 - Note participants attunement to me and my states throughout
 - E.g. “this must be difficult to hear”, “does that makes sense?”

Summing up:

We have talked a lot during this interview, is there anything else you feel would be important to discuss before we finish up?

Has this interview raised any thoughts for you you'd like discuss?

Thank you very much for taking the time to take part in this study

Follow with questionnaires and debrief

Appendix 5: Participant Information Sheet



University of Glasgow | College of Medical,
Veterinary & Life Sciences



Mentalizing in a Forensic Mental Health Setting – Challenges for staff

Participant Information Sheet (Version 2, 11th September 2014)

Thank you for reading this information sheet. I would like to invite you to take part in a research study. My name is Stephanie Hunter and I am undertaking research investigating forensic mental health staff's capacity for mentalization in difficult clinical situations. I am a student at the University of Glasgow and this research project is in part fulfillment of my Doctorate in Clinical Psychology. I would very much appreciate if you would take the time to read this information sheet and consider taking part in this study.

What is the research about?

Forensic mental health staff are often faced with difficult and challenging clinical situations with patients. One of the skills that can help in such situations is mentalization (the ability to attune to our own and other people's intentions, beliefs, thoughts and desires and as a result explain both our own behaviour and the behaviours of others). Such a process can often be disrupted as result of heightened emotional situations. I am interested in exploring staff capacity to mentalize in difficult clinical situations and how this may be impacted upon by levels of burnout and ward atmosphere.

Why am I being asked to take part?

All staff working within forensic mental health services throughout NHS Greater Glasgow and Clyde have been invited to take part in this study. Working within a forensic mental health setting, you are faced with difficult

Appendix 5: Continued

and challenging situations and I would like to develop an understanding of how mentalization can help in such situations. As you have experience in this field and have daily patient contact you are an invaluable source of information. You are eligible to participate in this study if you:

- Work directly with forensic mental health patients
- Have over 1 year of experience in your current role or in a similar capacity
- Work over 20 hours per week
- Have English as a first language

The study aims to recruit 20 to 30 participants from forensic mental health services throughout NHS Greater Glasgow and Clyde.

Do I have to take part?

You do not have to take part in this study. It is up to you whether or not you wish to participate in the study. If you decide to take part you will be given this information sheet and be asked to sign a consent form. The consent form is a way of making sure that you know what you have agreed to. If you decide to take part you are still free to withdraw from the study at any point in time.

Taking part in the study – What will I have to do?

I will be attending your place of work to discuss this study with people who are interested in taking part. I will advise you of the dates via your ward manager. This will provide you with an opportunity to ask any questions about the study. If you are interested in taking part I would ask you to sign a consent form agreeing to take part. Following this I would ask you for some information about your job. This information is confidential and only the researcher will have access to this information. I will then arrange a time to carry out an interview with you during work \

Appendix 5: Continued

time that will ask about mentalization in two difficult or challenging clinical situations. This interview will last for approximately one hour and will be recorded for transcription and analysis. Following the interview I will ask you to complete a Burnout Questionnaire and a Ward Atmosphere Questionnaire. It should take approximately 10 minutes to complete the questionnaires. All of the information gathered will be kept confidential with only the researcher having access to it. I would like to emphasise that interview and the questionnaires are not tests and there are no correct answers. Information from the interview will be analysed and rated for mentalization capacity and utility using the Metacognitive Assessment Scale (Semerari A., Carcione A., Dimaggio G, Falcone M, Nicolò G, Procacci M. & Alleva G (2003) How to evaluate metacognitive functioning in psychotherapy? The Metacognitive Assessment Scale and its applications. *Clinical Psychology and Psychotherapy*, 10, 238-261).

What are the benefits to taking part?

There are no direct benefits to you in taking part in this study. However, the information that we learn from the study will help to better inform the support to forensic mental health staff in the development of their skills and competencies. The information will also support the development and provision of forensic mental health services and staff training.

Is there a downside to taking part?

As stated above, in the interview you will be asked to discuss two difficult or challenging clinical situations. We do not expect you to be worried or distressed by your participation in the study. However, if you have any concerns about what we discuss, you can contact the researcher for more information or indeed discuss this further with your supervisor or another member of your clinical team. Although we do not anticipate that participating in this study will cause you any distress, if this did happen we will help you to access appropriate support if needed.

Appendix 5: Continued

Will my taking part be kept confidential?

All of the information gathered will be kept confidential with only the researchers having access to it, as well as representatives of the Study Sponsor who may access it for audit purposes. I will ask for some personal details such as your name and age as well as some occupational details however this information will be made anonymous. Each participant will be given a code. Only the researcher and her supervisor will have access to the identifiable information. This is necessary in case any participant decides to withdraw from the study and I need to remove their data. This identifiable information will be kept in a locked filing cabinet within the Institute of Mental Health and Wellbeing, Gartnavel Hospital. Individual results will not be shared with management and no identifiable information will be included in the publication of this research. The interview will be conducted within the work place in a location that is separate to the wards.

What will happen to the results of the research study?

I will provide you with a summary of the results of the study. The final results and conclusions of the study may be published in a scientific journal and will form part of my qualification of Doctorate in Clinical Psychology. As stated above, your identification will not be included in any publication.

Who is organising and funding the research?

The University of Glasgow and NHS Greater Glasgow & Clyde is acting as Sponsor for the research.

Who has reviewed the study?

The study has been reviewed by the University of Glasgow to ensure that it meets standards of scientific conduct. It has also been reviewed by the University of Glasgow, College of Medical, Veterinary and Life Sciences, College Ethics Committee to ensure that it meets standards of ethical

Appendix 5: Continued

conduct and by the NHS Greater Glasgow and Clyde Research and Development department. The project has also been approved by management and the Forensic Mental Health Audit and Research Committee.

What if I want to make a complaint?

If you are unhappy about any aspect of the study and wish to make a complaint, please contact the researcher in the first instance but the normal NHS complaint mechanism is also available to you.

Contact for Further Information

If you have any questions you would like to ask, please do not hesitate to get in contact.

Researcher:

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Tel: 0141 211 3920

**Thank you very much for reading this and for any further
involvement you may have with the study.**

Appendix 6: Participant Consent Form



University of Glasgow | College of Medical,
Veterinary & Life Sciences

Participant Opt-In & Consent Form

(Version 2, 11/09/2014)



Mentalizing in a Forensic Mental Health Setting – Challenges for staff

Please Initial Below

I confirm that I have read and understand the information sheet
(Version 2, 11 September 2014) for the above study and have had
the opportunity to ask questions

☐

I understand that my participation is voluntary and that I am
free to withdraw at any time, without giving a reason

☐

I understand that all information will be kept confidential
and that only the researcher and her academic supervisor
will have access to that information, as well as representatives
of the Study Sponsor who may access it for audit purposes

☐

I give permission for my interview to be audio recorded

☐

I agree to take part in the above study

☐

Name of Participant

Date

Signature

Researcher

Date

Signature

Thank you for taking part in this study (1 copy for participant and 1 for
researcher)

Appendix 7: Examples of types of ruptures and MAS and LACS coding from interview transcripts

MAS

MAS Coding	Level	Quotes
Self Reflectivity (S)	S5	<p>“it makes me, it makes me very aware that I have to prepare more because I think, I have to actually think her I going to feel if this happens, like I will plan for if this happens and I'll plan if it goes, if it doesn't go so well, em and that makes me feel a little bit better if I know.”</p> <p>(P:012, 44-46, Unresolved situation where the participant describes the patient as refusing to engage in sessions with the participant despite previous positive engagement).</p>
	S6	<p>“and it does kind of annoying you and grind on you, you know and it's that head space to deal with it and if there is a lot going on it can be more difficult. like they don't think twice about saying something to you or are being passed remarkable about you yet when you say something to them then it's like a major issue, and you're not doing like disrespectful or like rude you are actually being really quite sensitive to the issue”</p> <p>(P:014, 69-73, Unresolved situation where the participant is describing constantly having to check that a patient is complying with personal hygiene as per the ward routine and the patient then complaining about the participant to management).</p>
	S7	<p>“Em yeah there were times when you know he would stare, which made me feel quite uncomfortable. There were times where you know you obviously had to be aware of where you were standing in relation to him and things like that, so I guess you where, I was always kind of feeling aware, always feeling you know that at any point he could kind of lunge towards me very quickly, it didn't actually ever happen but he had expressed to members of the nursing staff that during our sessions he had been having urges towards me.”</p> <p>(P:010, 48-53, Resolved situation where the participant is taking about overcoming the challenges of managing a patient 's risky behaviours in order to engage them in social skills training so they can participate in group intervention work).</p>
	S8	<p>“I felt really quite frustrated and I guess a bit angry as well, em but I think frustration is probably the number one feeling that I had because it is something that we have already tried to work through and deal with on a number of occasions, and yet it keeps coming back to the fore.”</p> <p>(P:001, 54-56, Resolved situation where the participant describes a patient with personality disorder over imposing themselves onto the care and recovery of fellow patients leading to disputes with members of staff).</p>
	S9	<p>“it was as if the spotlight was on me, eh so it was kind of hard to not react to that because as I said as well is because you are dealing with other guys, if that was another person I would have probably have been a bot firmer, so it's kind of hard because I have also got to running through my head the thinking that will the other guys be thinking that I am scared of them, will they be thinking that I am treating him differently from them, which of course I am but not in a eh, not in the way that they would probably think. Eh so it was quite hard to kind of sit there and take it eh because you, from speaking to my colleagues he is kind of a guy that is he pushes boundaries quite a lot to so that is the way they have spoken about how to deal with him before so eh, I was kind of going with their kind of guidance. It was pretty difficult so, what they had said to me</p>

		<p>before as well was that to try and not to do anything, and try to deal with it later once things have calmed down.”</p> <p>(P:018, 47-56, Unresolved situation where the participant talks about being accused of laughing at a patient by the patient, the patient then goes on to verbally abuse and attempt to humiliate the participant in the presence of other staff and patients).</p>
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Appendix 7: Continued

MAS Coding	Level	Quotes
Understanding Others (O)	O3	<p>“she thinks that she is a bloody supermodel so she does, I don't know if it's competition are not, em because if there is any guys on the ward she is all around them... And I was like oh my God, she is, she is in love with herself but she doesn't like the younger pretty women. I don't know if you know a member of staff L in one of the other wards, but she hates her, absolutely hates her, because she as beautiful, em and she is very vain, so I don't know if its just that or...”</p> <p>(P:009, 304-311, Resolved situation where the participant describes dealing with a patient with a learning disability and a personality disorder. The participant describes the patient as having broken the ward rules and as such the participant was talking to the patient at which point the patient then began to verbally abuse the participant trying to humiliate them. The participant was then involved in restraining the patient and viewed the situation as resolved because the patient was then less challenging towards them).</p>
	O4	<p>“well I would like to thank that she may be is saying these things because she was maybe embarrassed you know, at having to be told simple things, em I may not be professional and I don't know if what I am saying is true but I really don't think that she actually cares, you know, em whatever they say and do there isn't really any remorse behind anything it's just a flippant sorry or you know there is no genuine feeling from them, that is my perception.”</p> <p>(P:014, 98-102, Unresolved situation, where the participant describes difficulties in challenging a patient to change their behaviour which leads to the patient complaining to management).</p>
	O5	<p>“they like to intimidate you (laughs) it's quite often a fight for power, especially with the learning disabled patients, em I don't know what it is they just like to prove that they are the big bad. But then when you go to the guys wards it's completely different with the learning disabled patients.”</p> <p>(P:009, 93-95, Unresolved situation where the participant describes the patient as unsettled and challenging and as such there grounds access and cigarette time had been revoked. This resulted the in patient becoming verbally and physically abusive towards the participant).</p>
	O5	<p>“I often have wondered how he has been feeling during those times because, you know, she would continually put him down, em and he would just kind off set there looking at the floor and just, you know, kind of feel really like bad for him because she is not being very nice to him and you think that he must be just hurting inside. Em is not a nice situation to kind of, observe and other people.”</p> <p>(P:010, 101-104, Resolved situation, see above).</p>
	O6	<p>“I think that he was probably over the moon you know that he thought he was going out for a cigarette and it was something, or obviously there's not very much to do in Rowenbank it's a very very restrictive environment. And the patients don't have a lot going on, probably not a lot of things to look forward to and cigarettes are one of the things, even although the cause preoccupations at times. Em so for him that was probably a huge huge deal that he thought that he was going to get, or have something to look forward to and something that he was going to enjoy and then I had to turn round and say oh actually you can't.”</p> <p>(P:016, 69-75, Resolved situation, where the participant describes telling a patient that they can have grounds access for a cigarette as</p>

	O7	<p>a reward for having their bloods taken before realising that due to the level of risk the patient is currently not allowed grounds access. The participant describes being honest with the patient regarding their mistake).</p> <p>“He asked to speak to me, which from previous situations this is kind of how he works. He needs to have time to reflect on the way he has been and he does generally reflect on it and come back and say some valuable points and discuss why he has been the way he has been.” (P:001, 138-140, Resolved situation, see above).</p>
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Appendix 7: Continued

MAS Coding	Level	Quotes
Decentration (D)	D1	<p>“they like to intimidate you (laughs) it's quite often a fight for power, especially with the learning disabled patients, em I don't know what it is they just like to prove that they are the big bad. But then when you go to the guys wards it's completely different with the learning disabled patients... I think she might have been personality disordered as well, em which would have a lot to do with it, I really can't remember what her diagnosis was, it was learning disability and maybe personality disorder.” (P:009, 93-101, Unresolved situation, see above).</p>
	D2	<p>“I think it is kind of, I think we have done, we have kind of tried every kind of angle, eh I think, so I don't know if it's just, if it would just take time for him to, I don't know maybe understand what he has done or eh or a time more time to get used to the environment which is more restricting than what he was used to security wise etc. so aye I don't really have an answer to that I am afraid, I think I have personally tried different approaches but it doesn't really work.” (P:018, 252-256, Resolved situation, where the participant describes trying to care for a patient who feels he should not be detained in a forensic mental health hospital. The patient is refusing food in protest and will not talk to staff about how he is feeling).</p>
	D2	<p>“Em and I think it probably could have exploded on the ward em and I just went back and spoke to him again and I apologised, that I had said he could go out for a cigarette and actually on his current observation level that wasn't possible and that was my mistake for seeing that. Em but that we would work towards, that is what we would work towards and once he got has levels reduced again he would be able to quote for a smoke. And actually he kind of accepted it quite well and it was okay.” (P:016, 44-49, Resolved situation, see above).</p>
	D3	<p>“I think he was very angry at that point and I think also he was looking to gain some sort of control, he was shouting so that others would see that, to share his opinions, he would say what he wanted, he would tell people what to do... but I think also he is over sensitised and possibly a wee but suspicious and a wee bit paranoid and is reading more into something and there might be.” (P:001, 101-111, Resolved situation, see above).</p>
	D3	<p>“well you do, you know, sometimes you will say I'm really sorry that I have to say this but, and you know em I hope you don't feel embarrassed by me having to say this to you but this is what has got to be done, and something she will be like that “ah no problem that's fine, that's fine” and then other times she well just stare right through you and eh so you do kind of just try and, you can normally see what kind of mood they are going to be in when they wake up in the morning so you are like that okay got it, but then you just treat everybody the same way it's not as if we are going to treat you like this today or because of your mood I am going to be more challenging to you, if anything we do kind off pussy foot around them a wee bit, you know, because yes we do try and be sympathetic, not every day they are going to wake up in a good mood or in a good place so you know it's just every day is different.” (P:014, 138-146, Unresolved situation, see above).</p>

Appendix 7: Continued

MAS Coding	Level	Quotes
Mastery (M)	M5	<p>“everyone needs to be working as part of the team and if one person said something then you need to take that further, because you need to show them that you are sticking together because if not they will just try and rip you apart, especially in here with the women patients.” (P:009, 46-49, Unresolved situation, see above).</p>
	M6	<p>“not at all, no, every day as you know you just get up and you do your turn, and whatever happens in the morning you will say it and that's it and then she will go out and come back and everything is fine you know I would never have a lasting, you know, gripe with anyone.” (P:014, 129-131, Unresolved situation, see above).</p>
	M7	<p>“it's actually easier for me to work on a one-to-one basis em with him than in a group because he doesn't kind off function well within a group, and it does affect the whole group dynamics as well, so I have to take those kind of things into consideration.” (P:010, 132-134, Resolved situation, see above).</p>
	M8	<p>“Em I think it's kind of shows just trying to be quite em honest with your patients and upfront about things even although sometimes it's maybe not the best news that they are going to get, or it, but if actually they know that from the start then it's less em you know maybe makes them less annoyed or less disappointed further down the line as they think something is going to happen and it's not.” (P:016, 91-94, Resolved situation, see above).</p>
	M9	<p>“I don't know if its knowledge of the patient, I think that you just get to know them when they want to speak and when they don't want to speak perhaps body language is well etc etc, but I think that it is more just knowledge of the patient and how they generally like to deal with things... Probably the only thing I would think I may have done differently is to have said to the member of staff who was pregnant do you want to do medications. If this had been done in the first place it might have meant that the situation would not have been allowed to escalate.” (P:001, 178-192, Resolved situation, see above).</p>

Appendix 7: Continued

Original Basic Anchors for the MAS:

SELF REFLECTIVITY

Basic Requirements

S1. The subject acknowledges having mental functions and a representational nature of thoughts.

S2. The subject represents himself as a person with autonomous thoughts and feelings.

Identification

S3. The subject is able to distinguish and differentiate his own cognitive operations (e.g. remembering, imagining, having fantasies, dreaming, desiring, deciding, foreseeing and thinking).

S4. The subject is able to define and distinguish his own emotional states.

Differentiation

S5. The subject recognizes that the representation of the self and/or of the world is subjective and/or fallible and/or that his own opinions have changed or are changeable.

S6. The subject recognizes the limited impact that expectations, thoughts and desires have on reality

Relation amid variables

S7. The subject recognizes that his behavior may be determined by one specific mode of cognitive and/or emotional functioning and admits being influenced by social and/or interpersonal variables related to the context of his cognitive and/or emotional functioning, or related to his behavior.

Integration

S8. The subject is able to give a complete description of his own mental state and/or of the interpersonal processes in which he is involved, distinguishing cognitive and/or emotional elements.

S9. The subject is able to integrate into a coherent and complex narrative his different modes of cognitive and/or emotional functioning.

UNDERSTANDING THE OTHER'S MIND

Basic Requirements

O1. The subject recognizes the existence of mental functions relative to the other.

O2. The subject represents the other as a person with autonomous thoughts and feelings.

Identification

O3. The subject is able to distinguish the other's cognitive operations (such as remembering, imagining, having fantasies, dreaming, awaiting, foreseeing, meditating).

O4. The subject is able to distinguish the other's emotional states.

Relation amid variables

O5. The subject makes plausible inferences about the other's mental state recognizing the communicative value or signs of attitude or behaviour

Integration

O6. The subject is able to give a complete description of the others' mental states and/or interpersonal processes in which the other is involved by distinguishing cognitive and/or emotional elements.

O7. The subject is able to integrate the other's different modes of cognitive and/or emotional and/or relational functioning into a coherent narration.

DECENTRATION

D1. The subject recognizes that he is not necessarily the centre of the other's thoughts, feelings and emotions and /or that the other's actions stem from goals and reasons mostly independent of the relationship he has with the subject.

D2. The subject recognizes that the other might perceive events in a different way from his own and/or interprets them differently.

D3. The subject recognizes that variables, such as time, individual development, experiences in determining the modes of the mental functioning of the other and/or recognizes that personal and relational events influence the other's processes and mental states.

MASTERY

Basic Requirements

M1. The subject discusses his own behavior and psychological processes and states not as simple matter-of-fact dates but as tasks to be done and problems to be solved.

M2. The subject is able to define the terms of the problem in a plausible way.

First level Strategies

M3. The subject tries to act directly on the problematic state by modifying the general state of the organism.

M4. The subject avoids the cropping up of problematic states and/or uses the relational context as a support.

Second level strategies

M5. The subject faces the problem voluntarily imposing or inhibiting a behaviour on himself.

M6. The subject faces the problem voluntarily adjusting his mental order.

Third level strategies

M7. The subject faces the problem acting upon the evaluations and beliefs which are at the basis of the problem itself and/or using his general knowledge of his own mental functioning.

M8. The subject faces the interpersonal dimension of the problem using his own general knowledge of other people's mental functioning.

M9. The subject faces the problem accepting his own limits in the management of his own self and influencing events.

Appendix 7: Continued

LACS

LACS Coding	Attribution Quotes
<p>Agent: Patient Target: Staff Stable/Unstable: Stable Global/Specific: Global Internal/External (Agent): Internal Internal/External (Target): External Personal/Universal (Agent): Personal Personal/Universal (Target): Universal Controllable/Uncontrollable (Agent): Controllable Controllable/Uncontrollable (Target): Uncontrollable</p>	<p>“Yeah I think I felt kind of hurt by it, you know, as much as the relationship was a difficult one because of her diagnosis I didn't think she would ever quite have went that far and it felt very much, and it was said to specifically just to hurt, which I think can be quite difficult to handle sometimes.” (P: 002, 96-99, Att. No.11)</p> <p>“I made it very explicit, and documented it immediately, and I made a point of communicating to staff to say that look I have told him this, <u>so that, because I knew that, I just knew that he was going to accuse me of not giving him the information and a knew, I just knew that.</u>” (P: 006, 149-151, Att. No.10)</p> <p>“Em you had to be aware of what you were saying because <u>the patient would then have a negative reaction, so you had to, you always had to be way ahead of the game, em and that was very stressful and I was spending sometimes you know, up words of a couple of hours a day, every day I was on shift, sometimes longer dealing with this but also dealing with the behaviours and all the rest of it when escalated as well.</u>” (P: 011, 80-84, Att. No.5)</p> <p>“eh I think she just doesn't think, I think that is again just part of her traits, I think that it's just the way she is, you know, em <u>because she does continue to be like that, as she does have to be continued to, you know, be told to watch her manners and not to be pass remarkable and you know, her social skills are you know, so it is just a constant chip chip chip.</u>” (P:014, 214-217, Att. No.14)</p> <p>“So em staff when end and kind of discussed it with him and I left, because I just felt I left the situation because I was getting all, actually I was getting quite upset as well, I don't know it was just a mix of emotions at the time because <u>he was shouting in my face and he was kind off it was as if he was getting away with it.</u>” (P:019, 165-168, Att. No.13)</p>
<p>Agent: Staff Target: Patient Stable/Unstable: Stable Global/Specific: Global Internal/External (Agent): Internal Internal/External (Target): External Personal/Universal (Agent): Personal Personal/Universal (Target): Universal Controllable/Uncontrollable</p>	<p>“Em that she did not like that people tip toed around about her em so I think that was a big difference, really big, and I think as well, em maybe just the kind of better understanding of what she could cope with and what she couldn't, in that one of my pet peeves was always if people would tell her two weeks in advance, or something, that she was going to go on a shopping trip. And as you probably know as well that is a lot of information first someone with that kind of diagnosis as she couldn't really process it as she would get really excited about it, then she would get really down about it and then she would get really anxious and the whole two weeks would turn into a complete rollercoasters for her. <u>So you know things like that helped</u></p>

<p>(Agent): Controllable Controllable/Uncontrollable (Target): Uncontrollable</p>	<p>as well because after a few months they made me her key worker and I said that that wasn't allowed to happen and that she would get told on the day where she was going and things like that.” (P: 002, 185-194, Att. No. 23)</p> <p>“oh just annoyed, because he's like I want this suit, but you can see why because it is his money and he's like what's the problem. Eh but as I said I hadn't been here long so I needed to see if it was okay that he could spend his money on a suit.” (P:003, 198-200, Att. No. 9)</p> <p>“I think it has impacted on me, I think it has impacted a little bit on my confidence, I think I sometimes worry that is going to happen again, that I am going to do something wrong, or say the wrong thing, because of my level of training and I sometimes think is it my fault, that I say the wrong thing, have I kind of said the one thing that they didn't want to hear.” (P:005, 356-359, Att. No. 26)</p> <p>“So I suppose my approach was very much maybe being clear from the beginning what we are going to do, em we would do a timetable kind of thing where we would have now column and next column... so that has been quite helpful actually to try and refocus because it is much more it is practical as well, like you are putting the sticky notes down and you are moving them over. Em and she is much more engaged because she is like oh I have a choice here.” (P:015, 115-122, Att. No. 5)</p>
<p>Agent: Patient Symptoms Target: Patient Stable/Unstable: Stable Global/Specific: Global Internal/External (Agent): Internal Internal/External (Target): Internal Personal/Universal (Agent): Personal Personal/Universal (Target): Personal Controllable/Uncontrollable (Agent): Controllable Controllable/Uncontrollable (Target): Controllable</p>	<p>“you know I think that actually it may be that I didn't really approach her all that differently. Em and I was always, maybe even sometimes brutally honest with her you know. I think a lot of people, because of her challenging behaviour, felt that you know that you had to treat her as though she was fragile.</p> <p>Em I didn't really take that approach, you know, she said something that was out of order I would tell her that that was out of order and really that you know just because you have this diagnosis you can't talk to me like that.” (P: 002, 178-183, Att. No. 21 & 22)</p> <p>“Em so there were periods where she, after she had had a seizure her behaviour was very erratic and she would become violent but not really be fully orientated eh so there was a lot of kind of shame involved and that epilepsy episodes as well because you know she would be incontinent at those times as well and she found that a bit difficult to deal with, and didn't want staff support around those times, although that's when she needed it the most. So her situation was complicated even further by that.” (P:005, 104-109, Att. No. 9)</p>

Agent: Patient Target: Patient Symptoms Stable/Unstable: Stable Global/Specific: Global Internal/External (Agent): Internal Internal/External (Target): External Personal/Universal (Agent): Personal Personal/Universal (Target): Universal Controllable/Uncontrollable (Agent): Controllable Controllable/Uncontrollable (Target): Uncontrollable	<p>“I think it made him feel, he was feeling bad you know feeling quite bad about himself and feeling about hopeless because he knows that if he continues to act that way that his chances of moving on gets slimmer. I just said to him that it was just a blip and that we all get that way at times. You know just normalising it to the extent that, <u>just to help him to not beat himself up all day because he would do that and that would just be the whole theme for the next few days</u> and he would be very sullen and not really communicating with staff much and I didn't want that” (P:006, 234-240, Att. No. 17)</p>
Agent: Patient Target: Patient Symptoms Stable/Unstable: Stable Global/Specific: Global Internal/External (Agent): Internal Internal/External (Target): Internal Personal/Universal (Agent): Personal Personal/Universal (Target): Personal Controllable/Uncontrollable (Agent): Controllable Controllable/Uncontrollable (Target): Controllable	<p>“Yeah I think that's probably been it. I think as well em he's changed, that I think he thought he was going to come here and do two years here, that's what he said at the start and I think that he has been realising that it's not, but then it confuses me sometimes because I don't know like, I just know basic psychology stuff but then you're like that, <u>if you are saying he is a psychopath but he is still able to learn</u> isn't he, it's like they can still mask it enough to you know, he can't be that bad that he is able to do it, we know he is able to go to Tesco's, it's like so, well, people have got to be able to change or adapt or learn skills.” (P:007, 316-322, Att. No. 29)</p>
Agent: Patient Target: Peers and Staff Stable/Unstable: Stable Global/Specific: Global Internal/External (Agent): Internal Internal/External (Target): External Personal/Universal (Agent): Personal Personal/Universal (Target): Universal Controllable/Uncontrollable (Agent): Controllable Controllable/Uncontrollable (Target): Uncontrollable	<p>“And you couldn't, without actually you know, without gagging him you couldn't actually prevent that, you know him being distressed. So that was having an effect on the entire ward and we had that for about a year and a half em with you know, no break and staff in here were so burnt out, I was burnt out <u>and it was almost like because we had this plan that we were all working towards if that had fallen through</u> or I don't know how you we all would have, we probably couldn't have coped.” (P:006, 378-383, Att. No. 28)</p>

Appendix 7: *Continued*

LACS Coding Dimensions

Stable/Unstable:	This dimension concerns how lasting the identified cause is regarded as being. Causes which are likely to recur reasonably consistently in the future are coded as Stable, while those which are unlikely to recur are coded as Unstable.
Global/Specific:	This Dimension is concerned with the range of outcomes of the cause which has been identified. Cases which cover a wide range of possible actions or implications are coded as Global, while those which cover only a narrow range are coded as Specific.
Internal/External:	The Internal dimension concerns whether the cause is considered to originate from the dispositional characteristics (such as character or personality) of the person or people concerned, or whether it relates to factors in the situation. Dispositional attributions are coded as Internal, and situational ones are coded as External.
Personal/Universal:	Stratton et al. (1986) describe the Personal dimension in terms of whether the outcome is likely to affect the speaker or not. Those which are likely to affect the speaker are coded Personal, while those which essentially relate to a wider context are coded Universal.
Controllable/Uncontrollable:	The Controllable dimension is coded according to whether the identified cause is seen as open to being influenced or directed by the person, or whether it is something which is seen as being not amenable to any influence or direction. Causes that can be influenced are coded as Controllable, but those which cannot, are coded as Uncontrollable.

Appendix 8: Ethical Approval Letter



University of Glasgow | College of Medical,
Veterinary & Life Sciences

15 September 2014

Professor Andrew Gumley
Department of Psychological Medicine
Administration Building
Gartnavel Hospital
1055 Great Western Road
Glasgow G12 0XH

Dear Professor Gumley«Principal_Investigator»

MVLS College Ethics Committee

**Project Title: Mentalizing in a Forensic Mental Health Setting –
Challenges for staff.**

Project No: 200140003

The College Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Project end date: 30/06/2015.
- The research should be carried out only on the sites, and/or with the groups defined in the application.
- Any proposed changes in the protocol should be submitted for reassessment, except when it is necessary to change the protocol to eliminate hazard to the subjects or where the change involves only the administrative aspects of the project. The Ethics Committee should be informed of any such changes.
- You should submit a short end of study report to the Ethics Committee within 3 months of completion.

Yours sincerely

Professor William Martin
College Ethics Officer
Approval200140003.docx

Professor William Martin
Professor of Cardiovascular Pharmacology

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West Medical Building
Glasgow G12 8QQ Tel: 0141 330 4489
E-mail: William.Martin@glasgow.ac.uk

Appendix 9: NHS R & D Approval Letter



Coordinator/Administrator: Dr Erica Packard/Mrs Elaine O'Neill
Telephone Number: 0141 211 9448
E-Mail: erica.packard@ggc.scot.nhs.uk
Website: www.nhsggc.org.uk/r&d

R&D Management Office
Western Infirmary
Tennent Institute
1st Floor 38 Church Street
Glasgow, G11 6NT,

27 August 2014

Mrs Stephanie Hunter
Trainee Clinical Psychologist
Admin Building
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow G12 0XH

NHS GG&C Board Approval

Dear Mrs Hunter,

Study Title:	Mentalizing in a Forensic Mental Health Setting – Challenges for staff
Principal Investigator:	Mrs Stephanie Hunter
GG&C HB site	Forensic Mental Health
Sponsor	NHS Greater Glasgow and Clyde
R&D reference:	GN14CP416
REC reference:	n/a
Protocol no:	V7; 09/07/2014

I am pleased to confirm that Greater Glasgow & Clyde Health Board is now able to grant **Approval** for the above study.

Conditions of Approval

1. **For Clinical Trials** as defined by the Medicines for Human Use Clinical Trial Regulations, 2004
 - a. During the life span of the study GGHB requires the following information relating to this site
 - i. Notification of any potential serious breaches.
 - ii. Notification of any regulatory inspections.

It is your responsibility to ensure that all staff involved in the study at this site have the appropriate GCP training according to the GGHB GCP policy (www.nhsggc.org.uk/content/default.asp?page=s1411), evidence of such training to be filed in the site file.

Appendix 9: Continued

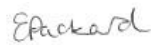
2. **For all studies** the following information is required during their lifespan.
 - a. Recruitment Numbers on a monthly basis
 - b. Any change of staff named on the original SSI form
 - c. Any amendments – Substantial or Non Substantial
 - d. Notification of Trial/study end including final recruitment figures
 - e. Final Report & Copies of Publications/Abstracts

Please add this approval to your study file as this letter may be subject to audit and monitoring.

Your personal information will be held on a secure national web-based NHS database.

I wish you every success with this research study

Yours sincerely,



Dr Erica Packard
Research Co-ordinator

Cc: Prof Andrew Gumley

Appendix 10: Major Research Project Proposal

Lay Summary

The skill of being attuned to other people's intentions, beliefs, thoughts and desires and as a result be able to explain their behaviours is referred to as 'Mentalization'. Our ability to mentalize is promoted by the quality of our early relationships especially those with our parents as they promote security, autonomy, curiosity and openness. Service users in a forensic mental health setting often have complex backgrounds characterised by trauma and poor early relationships with care givers. As a result their ability to form secure relationships with mental health staff can be disrupted. This can lead to heightened emotional distress and behaviour that staff can experience as unpredictable and difficult to understand. Therefore, staff's capacity to mentalize has an important role to play in supporting service users' recovery in a forensic mental health setting. This study intends to develop a methodology to assess staff's capacity to mentalize and reflect upon difficult clinical situations. The study proposes to carry out a series of interviews with staff that will elicit mentalization and attributions. The study will explore the reliability and validity of the interview methodology that is developed to determine its possible use within forensic services to support staff training and service development. Staff will also be asked to complete a burnout measure and a ward atmosphere measure as it is thought that higher scores on such measures may result in reduced capacity to mentalize. Information gathered from the study will support the development and provision of forensic mental health services.

Abstract

Introduction: Recovery focused approaches to care are required to be integrated into Forensic Mental Health settings (The Scottish Government, 2012). However several challenges exist to this, in particular forensic mental health patients often present with complex backgrounds characterised by trauma and disorganised attachment (Adshead, 1998). In order for staff to develop secure attachment relationships with patients they often have to deal with several ruptures to the therapeutic relationship and this can really challenge them in terms of their own capacity and utility to mentalize and reflect upon the situation. Studies have found that an individual's capacity and utility for mentalization is often disrupted during times of emotional distress (Bateman and Fonagy, 2011).

Aims: The aim of the study is to develop a methodology to assess staff's capacity and utility to mentalize and reflection upon difficult and challenging clinical situations. The study will explore the reliability and validity of the methodology that is developed to determine its possible use with in forensic services to support staff training and service development.

Method: Staff working within forensic mental health settings across NHS Greater Glasgow and Clyde will be invited to take part and will be asked to attend a semi-structured Attributions and Mentalization Capacity & Utility Interview. Staff will also be asked to complete the Maslach Burnout Inventory (MBI) and the Ward Atmosphere Scale (WAS).

Ethical Issues: Ethical approval will be sought from the local Research Ethics Committee and NHS Greater Glasgow and Clyde's Research and Development department.

Proposed Data Analysis: Dependent t – tests or Wilcoxon Signed-Rank tests (where appropriate) will be used to analyse the data. Pearson r or Spearman rho correlations (where appropriate) will also be used to analyse the data to determine whether a relationship exists between mentalization capacity and the level of ward atmosphere and burnout.

Inter-rater reliability will also be assessed using Cohen's Kappa Coefficient.

Service Implications: It is thought that the development of a methodology that captures staff's mentalizing capacity and utility, organisations will be better able to support staff in the development of their skills and competencies. As well as supporting the development and provision of forensic mental health services and staff training.

Introduction

Recovery

Recovery philosophies within mental health services have been redefined a number of times over the past fifty years. Rooted within the consumer movements of the 1960's and 70's the modern approach to recovery led to deinstitutionalisation and marked a shift from the traditional medical model of care which valued professional power and expertise towards a more client based approach. The modern recovery approach embraces values such as hope, choice, empowerment, healing and connection (Jacobson & Greenley, 2001). These modern approaches to recovery have been incorporated into government guidelines stating that all mental health services should seek to incorporate them into their practice (The Scottish Government, 2012). However this can prove very difficult for forensic mental health services where restricted freedom is a central feature of the setting.

Implementing a recovery focused approach within forensic mental health settings has been described as a tricky balancing act as staff have to weigh up level of risk verses client autonomy and choice (Paden, 2010). However, despite this, training and awareness around the recovery approach has supported forensic mental health services to change and develop a more recovery-focused approach. Paden and her colleague saw many inspiring examples of recovery focused practice while visiting services in New Zealand these included supporting clients to develop a sense of community through cooking group meals and maintaining the gardens. They also saw open book cases, ward pets and clients were given open access to the garden areas, clients were also given decreasing levels of security as they moved closer to discharge (Paden, 2010).

All of the services mentioned above highlighted the importance of relationships in the recovery-focused approach, both with friends and family and with staff. The services encouraged regular contact with family and friends and provided family rooms for those who had travelled long

distances. If positive interpersonal relationships are an integral part of the modern recovery focused approach it is imperative that staff are supported to understand how they might encourage and foster such relationships with clients (Adshead, 2001)

Attachment

The underpinnings of our ability to develop and maintain positive interpersonal relationships begins to develop from a very early age. John Bowlby (1969), the founder of attachment theory, proposed that it is a universal human need to form close bonds with others. Initially he put forward the idea that this was an evolutionary function that was designed to ensure that infants would be protected from predators. However, further research has been able to demonstrate that this evolutionary attachment process provides much more than just physical protection. Sroufe (1996) proposed that the goal of the attachment system is to keep the infant secure and that the system is first and foremost a regulator of emotional experience. How the attachment relationship develops between the infant and its care-giver shapes the infant's ability to self-regulate as an adult. These secure attachments allow the individual to develop internal working models of themselves, others and the world, based upon the interaction between themselves and their attachment figures. These internal working models then become embedded as internal cognitive structures (Mein, Kaplan & Cassidy, 1985). It is then thought that these internal cognitive structures provide a framework for the individual's cognitive processing of perceptions, events and relationships which in turn leads to the development of belief systems and cognitive schema (Beck, 1976). These early insecure attachments are thought to be risk factors in the later development of mental health disorders (Rutter, 1995).

Clients presenting with complex forensic mental health problems often have backgrounds that are characterised by trauma and disorganised or insecure attachment. It is likely that these individual's internal cognitive models make it difficult for them to manage stress and as a result they

have developed maladaptive behavioural strategies to try and manage their distress (Adshead, 1998). Those who are admitted to forensic mental health settings have often either lost or never had the ability to manage their own distress without either disassociating, becoming too close or distancing oneself or becoming violent. It is therefore important that forensic mental health settings seek to provide these patients with a secure and containing environment that may then allow for the patient to move to recovery and beyond.

An integral part of providing such a secure environment is the development of positive interpersonal relationships with staff. Mental ill health is likely to be a powerful stimulator of attachment behaviour, as the patient is often rendered vulnerable due to their illness. It has been highlighted that the main functions of any attachment relationship are to provide a secure and containing base to help manage anxiety and it can be argued that these functions are met by the interactions of both the patient and the health care professional to which they both contribute, this is referred to as the therapeutic relationship (Adshead, 1998).

Therapeutic Relationship

Multiple studies have demonstrated that the therapeutic relationship between patient and therapist is one of the most powerful predictors of a positive outcome of psychological therapy (Orlinsky & Howard, 1995; Gilbert & Leahy, 2007). Bordin (1979) has defined the therapeutic relationship as consisting of three main features: “an agreement on goals, an assignment of tasks or series of tasks, and the development of bonds” (p. 253). It is thought that these interpersonal processes are central to the promotion of change within therapy (Safran & Segal, 1996).

Despite comprehensive studies of what is required to form therapeutic relationships it can still be particularly difficult to establish such relationships with forensic patients. This is likely to be the result of a number of factors one of which being the patient’s attachment style and other being factors that staff bring to the relationship this can include their

own attitudes, beliefs and assumptions. Another factor is environmental influences, which can include the restricted nature of forensic settings. Cox (1996) has argued that staff who work within the forensic field are often exposed to particularly intense emotional experiences associated with the patient's illness and offence. It is possible that such exposure can have an impact upon staff's attitudes, beliefs and assumptions towards the patient, and this may further impact upon the therapeutic relationship that is developed. If these difficulties are present they can often be highlighted when there is a rupture within the therapeutic relationship. How ruptures within the therapeutic relationship are managed is often crucial to the process of change and a positive therapeutic outcome. These 'impasses' as they are often known tend to elicit feelings of despair and hopelessness within the staff member and can result in difficulties with maintaining a helpful presence with the patient. This is where supervision and training become extremely important in order to encourage reflection upon these processes and support to work towards a positive therapeutic outcome.

The literature concerned with the therapeutic processes has suggested that staff who care for individuals with long-term complex psychological and interpersonal difficulties will be profoundly influenced by their contact with such patients and often in an unconscious manner (Casement, 1991; Winnicott, 1949). The literature also proposes that if these feelings that are elicited by such work are not addressed within supervision staff will ultimately develop defensive attitudes and practices that will obstruct the therapeutic work (Kurtz & Turner, 2007). Bennett-Levy and Thwaites (2007) were able to identify a number of skills and strategies that should be used within the supervision process to support the staff member in dealing with ruptures and difficulties within the therapeutic relationship these include: the ability to self reflect on the situation, to demonstrate compassion towards the patient to be able to use the skill of metacognition and mentalization to understand the difficulties from the patients point of view and to use this in order to repair and further develop the therapeutic relationship.

Mentalization

Mentalization is described as a form of imaginative mental activity where we are able to perceive and interpret human behaviour, both our own and others, in terms of intentional mental states such as needs, desires, feelings, beliefs, goals, purposes and reasons (Allen, Fonagy & Bateman, 2008). Bateman and Fonagy (2010), use the terms capacity and utility to describe the individual's ability to develop and utilize mentalization skills. They propose that our capacity and utility to mentalize is crucial to our ability to successfully cope with intense emotions as it allows us to regulate and tolerate these distressing feelings. The process of mentalization is thought to consist of three stages; our ability to reflect upon our own mental states and understand why they lead us to behave in such a way, the ability to reflect upon the internal mental states of others and understand why they have behaved in a certain way and thirdly, to incorporate this information to support us in the maintenance and development of interpersonal relationships. Our ability to mentalize is therefore vital to our self-organisation and emotional regulation as well as social situations that require cooperation and competition (Bateman & Fonagy, 2010).

However, the extent to which we are able to master mentalizing skills is essentially influenced by our early experiences in terms of our early attachment relationships (Fonagy & Allison, 2012). Our ability to understand others initially begins with how well our own needs were understood and met by our caregivers as infants. Symbolic play which occurs in infants is generally agreed to be the precursor to the development of mentalizing abilities (Meins, Fernyhough, Russell and Clark-Carter, 1998). Studies have found that children who are securely attached to their mothers tend to engage in more frequent and sophisticated periods of solo pretense than children who were insecurely attached (Belsky, Garduque & Hrnacir, 1984; Matas, Arend & Srouf, 1978). Meins, Fernyhough, Russell and Clark-Carter (1998) proposed that children with securely attached relationships develop better mentalizing

abilities because their mothers are more likely to treat them as individuals with separate minds from an early age. This is similar to Ainsworth's (1971) theory that the mothers of securely attached infants are capable of perceiving things from the child's point of view and respect that the child is a separate person.

Ainsworth (1971) states that through the mother's ability to better 'tune in' to her child's current mental state she can make suggestions of alternative perspectives on reality in such a way that they can be readily assimilated. Meins et al (1998) found that children who were securely attached to their mothers and whose mothers interacted with them as individuals with separate minds were better able to adopt the perspectives of the experimenter and demonstrated a superior performance on assessment of their mentalizing abilities. Meins et al (1998) labeled this phenomenon 'maternal mind mindedness' and through later research has been able to demonstrate that it is not only important to the early development and conceptualization of mentalization skills but also to the development of theory of mind and language (Meins, Fernyhough, Wainwright, Gupta, Fradley & Tuckey, 2002).

These findings are in line with Bateman and Fonagy's (2004) original conceptualization that attachment security during infancy is a predictor in the evolution of mentalization capacity and utility. Yet, Liotti and Gilbert (2011) have highlighted that the activation of attachment systems within a threat situation can actually inhibit mentalizing capacity as the older threat defense (flight-flight) system also becomes activated and this prevents higher order cognitive processes such as mentalization. As a result of these findings Liotti and Gilbert (2011) have proposed that different aspects of mentalization may have evolved across different social contexts. They suggest that moving between different social contexts may involve switching between different forms of mentalization for example in a competitive context mentalization may be used to predict the intentions of others, or make comparisons between the self and others while, affiliative contexts may be more likely to enable a

mentalizing stance that promotes empathetic attunement and supports the development of social safeness.

These findings have important implications within the field of forensic mental health as staff are often faced with risky and stressful clinical situations that are likely to activate their threat defense system and when in this state of hyperarousal it is much more difficult to engage in mentalization. This could happen in situations where there has been a rupture in the therapeutic relationship or when a staff member is experiencing burnout. In order for staff to fully engage in a therapeutic relationship with patients they have to be able to demonstrate compassion towards the patient and this requires an ability to attune to and a desire to alleviate patients pain and suffering rather than just empathizing with them, but, the effects of such a process are likely to impact upon the staff's wellbeing and thus have an impact upon the staff's capacity and utility to mentalize. Bateman and Fonagy (2011) have since reviewed their stance on the processes underlying mentalization and have stated that an individual's capacity and utility for mentalization is often disrupted during times of emotional distress.

These findings present important implications for therapeutic work with forensic mental health patients as well. Given that attachment is the key to help foster and develop mentalization we can conclude that therapeutic work with forensic mental health patients needs to include the development of secure attachment relationships. However secure attachment relationships require a sense of freedom and an ability to explore the world and have autonomy (Holmes, 1996). Yet, how can staff provide this for patients within a forensic setting where the very nature of the setting restricts the patient's autonomy and freedom to explore (Paden, 2010).

Implications in current practice

Patients presenting with complex forensic mental health problems often have backgrounds that are characterised by trauma and disorganised

attachment which can undermine the individuals' capacity to utilize information regarding their own and others mental states in order to solve problems. In effect their ability to form positive secure attachments is disrupted and this will have an effect upon the development of therapeutic relationships. These deficits that patients display can often result in ruptures within the therapeutic relationship leading to difficult clinical situations that can challenge staff's own capacity to manage and maintain difficult and complex affects. Often these tricky clinical situations can disrupt staff's ability to show compassion towards patients and to reflect in the moment with patients to best manage and repair difficult situations. Staff's own ability to mentalize is often disrupted resulting in negative consequences for the therapeutic relationship and ultimately the recovery process.

Aims

The aim of the study is to develop a methodology to assess staff's capacity and utility to mentalize and reflection upon difficult and challenging clinical situations that arise within a forensic mental health setting. The study will explore the reliability and validity of the methodology that is developed to determine its possible use with in forensic services to support staff training and service development.

Hypotheses

The following hypotheses are proposed

1. The study will explore mentalization in relation to two clinical situations, both where ruptures in the therapeutic relationship have occurred, one with a positive outcome and one with a negative or unresolved outcome.
2. Higher scores on the Ward Atmosphere Scale will be negatively correlated with mentalization.
3. Higher scores on the Maslach Burnout Inventory will be negatively correlated with mentalization.

4. The study will explore staff attributions in relation to mentalization as well as the ability to reflect upon the therapeutic relationship with the patient.

Plan of Investigation

Participants

The participants of this study will include staff working within a forensic mental health setting it is hoped that most of the participants will be recruited from within Greater Glasgow and Clyde NHS however the researcher may also be able to link in with the Scottish Forensic Network and recruit staff from others areas if increased numbers are required.

Inclusion & Exclusion Criteria

The study will include staff who work therapeutically with forensic patients, as they are more likely to experience difficult clinical situations within the therapeutic relationship. This will include psychologists, psychiatrists, and qualified and unqualified nursing staff. Staff who have worked in their post or a similar post for up to one year will be included in the study. Participants will also have to be fluent in verbal and written English because of the need to rate audiotapes and the completion of written questionnaires which will be rated. Staff will also be required to give their informed consent prior to their participation in the study.

Recruitment Procedures

Information about the project will be distributed to staff working within the forensic mental health setting. Participants will be recruited from services within the NHS Greater Glasgow & Clyde Forensic Mental Health Directorate and potentially from other forensic services within NHS Scotland. Recruitment will begin with the Rowanbank Clinic, a 74-bed medium-secure forensic mental health unit. Further to this the researcher will then recruit from forensic wards at Leverndale Hospital, and out-patients at the Douglas Inch Centre. If further numbers are required it may then be possible for the researcher to recruit from the Orchard Clinic, a medium-secure forensic mental health unit situated in Edinburgh.

Measures

Attributions and Mentalization Interview

A measure that taps into the individual's capacity and utility to mentalize has been developed and adapted to fit this study. Interviews will be conducted with staff, which, will be recorded and transcribed verbatim. The Attributions and Mentalization Capacity & Utility Interview (See Appendix 3 for a copy of the semi-structured interview schedule) is based upon the Metacognitive Assessment Scale (MAS), (Semerari, Carcione, Dimaggio, Falcone, Nicolò, Procacci, & Alleva, 2003) and The five minute speech sample (FMSS) (Magaiia, Goldstein, Karno, Miklowitz, Jenkins & Falloon, 1985). The MAS is a tool that can be applied to narratives to measure individual's metacognitive abilities. It is comprised of three separate sub scales that provide measures of the sub functions within metacognition, these are: Understanding of One's Own Mind, Understanding of Other's Mind, and Mastery. Through analysis of the interview content the rater awards points in relation to the level of metacognition that is shown. These points are built up in order to provide a metacognitive profile of the individual and can be summed together to provide a total score of metacognitive ability. The five minute speech sample (FMSS) (Magaiia, Goldstein, Karno, Miklowitz, Jenkins & Falloon, 1985) consists of a five minute period of time where the participant talks about the patient and their relationship with the patient. This can then be coded in order to obtain a measure of staff's attributional style and level of criticism regarding the patients that they discuss during the interview.

Ward Atmosphere Scale (WAS), (Moos & Houts, 1968)

The Ward Atmosphere Scale (WAS) is a widely used measure with good reliability and validity for measuring a number of social aspects within an in-patient mental health setting (Moos, 1996). The WAS is a self-report questionnaire consisting of one hundred statements about the social climate within the clinical setting. It is split into ten subscales that produce three dimensions: relationship, personal growth and system maintenance. The relationship dimension reflects how active and energetic patients are, how supportive staff are and how much open expression of feelings is

encouraged. The personal growth dimension looks at the extent to which patients learn practical skills and are prepared for release, as well as how much patients seek to understand themselves. The system maintenance dimension looks at the importance of order and organisation and how much patients know what to expect by way of rules and procedures it also looks at the extend to which staff use measures to maintain control (Moos, 1996).

Maslach Burnout Inventory (MBI), (Maslach& Jackson, 1981)

The MBI is comprised of 22 items, each item asks the staff member whether they have experienced a particular feeling and if they have how often they experience it. Maslach and Jackson (1981) defined burnout as a syndrome comprising of three aspects: emotional exhaustion, depersonalisation, and reduced personal accomplishment, the MBI can be broken down into these three aspects providing a subscale measure for each. The MBI has been used widely in a number of settings and has yielded good validity (Schaufeli, Leiter, & Kalimo, 1995; Leiter & Schaufeli, 1996) and reliability (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). Frith, McIntree, McKeown and Britton (1985) were also able to standardise the measure within a British nursing population.

Design

This is an exploratory study that will test associations and will yield a non independent related samples test of difference. The independent variable under manipulation is clinical situation, either a resolved outcome or a negative/unresolved outcome following a rupture in the therapeutic relationship. The dependent variable being measured is mentalization capacity and utility, attributions and ward atmosphere and burnout levels.

Research Procedures

Staff working within a forensic mental health setting will be invited to take part in the research project and will be asked to attend a semi-structured interview with the researcher. They will be asked initially to recall a time

when a rupture in the therapeutic relationship has resulted in a positive outcome followed by a time when the outcome has been negative or unresolved. Each of these dialogues will be coded separately for staff's mentalizing capacity and utility. Staff will also be asked some information about the patient's characteristics in order to set the scene and provide a dialogue that can later assess staff attributions. Staff will then be asked to complete the questionnaires described above and will be debriefed upon the study.

Data Analysis

Prior to formal statistical analysis the data will be checked to see if parametric assumptions are met. As the data will be comparing two sets of scores generated from the same participants, Dependent t – tests or Wilcoxon Signed-Rank tests (where appropriate) will be used to analyse the data. Pearson r or Spearman rho correlations (where appropriate) will also be used to analyse the data to determine whether a relationship exists between mentalization utility and capacity and the level of ward atmosphere and burnout.

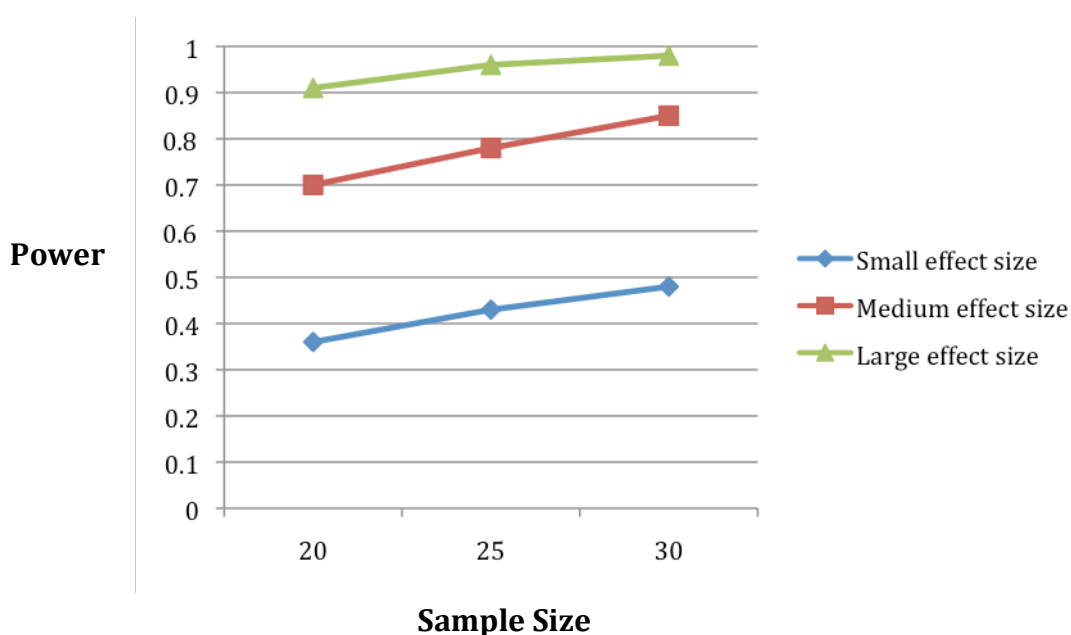
In order to explore the reliability and validity of the coding methodology used to assess staffs mentalizing capacity and utility it is thought that a test of inter-rater reliability such as Cohen's Kappa Coefficient (Cohen, 1960) could be used. This would be done by asking another researcher to code the data separately and compare their findings to that of the principle researcher's.

Justification of Sample Size

Given that the study is exploratory there is little research available to support estimations in sample size. Previous studies that have used the Metacognitive Assessment Scale as a measure have used sample sizes ranging from n=30 to n=65 (Mitchell, 2011; Lysaker, Warman, Dimaggio, Procacci, La Rocco, Clark, Dike, & Nicolò, 2008; Lysaker, Ringer, Buck, Grant, Olesek, Leudtke, and Dimaggio, 2012). In terms of the available resources, including time required for data collection, transcription,

coding, and analysis, it is predicted that 20 to 30 participants would be reasonable for this study. The study will explore patterns of scores and associations and will generate measures of central tendencies, standard deviations and 95% confidence intervals. This information will help to inform estimates of sample size to generate significant effect size for future studies. Power calculations can be used to provide estimates of the study's power to detect small, medium and large effect sizes across a range of participant numbers. Assuming an estimated correlation amongst repeated-measures of 0.5, a significance level of alpha of 0.05 and the assumption that the data is normally distributed, graph 1 below demonstrates estimates of the study's ability to detect different effect sizes across a range of sample sizes.

Estimates Of the Study's Power to Detect Different Effect Sizes Across A Range of Sample Sizes



Graph 1. Estimates of the study's power to detect small, medium and large effect sizes for the sample sizes ranging from 20 to 30 participants.

These estimates demonstrate that within the resources available, the study is expected to have reasonable power (>0.8) to detect a large effect size (>0.7) (Cohen, 1988) however it lacks adequate power to detect medium (>0.5) and small (0.3) effect sizes for sample sizes 20 to 25. Post-hoc effect size calculations will be carried out and this will serve to inform future studies in this area.

Settings & Equipment

The trainee will conduct research with participants at the Rowanbank Clinic, Glasgow. If recruitment from out with this site is required, participants will be seen at the site from which they are recruited which will be an NHS hospital or out-patient clinic. Research will be conducted whilst adhering to NHS data protection policies. The researcher will require access to a digital voice recorder, a highly sensitive microphone and an encrypted laptop. The researcher will also require adequate copies of the Ward Atmosphere Scale and the Maslach Burnout Inventory for participants to complete along with the administration and scoring manuals.

Health & Safety Issues

Researcher Safety

As the research is mainly being conducted within a medium-secure environment, appropriate health and safety considerations will apply. All research will be completed on NHS premises during working hours when other clinicians are present.

Participant Safety

While ethical approval will be sought before beginning data collection, some aspects of the process may be quite emotive. In particular, asking participants during the interview to reflect on a difficult situation may evoke an emotional response. However, participants will be made aware that they can withdraw from the study at any point and will be fully debriefed after the interview. Furthermore, they will be encouraged to

discuss any difficult issues that participating in the research has raised for them with the researcher or their supervisor within their place of work.

Ethical Issues

- Ethical approval will be sought from the local Research Ethics Committee and NHS Greater Glasgow and Clyde's Research and Development department.
- A consent form will provide details of the study and will require participants to give written consent to involvement. The form will clearly state that participants are consenting to involvement and can withdraw at any time.
- The nature of the current study may require participants to discuss potentially distressing material. The written consent form will clearly outline this risk to participants, and emphasise participants' right to withdraw from the study at any time.
- In order to ensure that participants have the opportunity to be debriefed time will be allowed at the end of the interview for participants to discuss their involvement in the project with the researcher. There may also be the possibility for an additional session to be arranged with the researcher should the participant feel that they require it. However, participants will also be encouraged to discuss any issues raised by participation in research with their supervisor.
- If issues arise during the interview that require follow-up or invoke a duty of care this will be discussed with the participant and the participant will be supported to take this to their supervisor and line manager where appropriate. The researcher will also be trained in managing distress and emotional arousal.
- Data will be anonymised by removal of personal identifiable information and details. Participants will be informed of the right to

confidentiality and how this will be upheld. Audio tapes will be converted to digital transcripts using Microsoft Word. Digital audio recordings will then be destroyed, and digital files stored on a password-protected and encrypted computer.

Financial Issues

A digital Recorder & sensitive microphone equipment will be required to record the interviews with participants. The researcher will also require a budget to attain 20 to 30 copies of the Ward Atmosphere Scale and the Maslach Burnout Inventory as well as the Manual for both the MBI and WAS. There will be costs for printing and photocopying of posters and information sheets, participant information sheets, participant consent forms and debriefing information sheets (See appendix 2 for Equipment and Consumable Costs).

Time Table

April 2014: Submit MRP Proposal

June 2014: Submit Ethics Approval Application

September 2014: Start Participant Recruitment

September 2014 – February 2015: Collect Data & Interview Participants

October 2014 – March 2015: Data Transcription & Coding

April 2015: Data Analysis

May 2015 – July 2015: Write-up & Submission

September 2015 - Viva

Practical Applications

Thus far very few studies have explored the nature of staff's mentalizing capacity and utility within a forensic mental health setting. This study will be one of the first to address this void within the research.

It is thought that through the development of a methodology that captures staff's mentalizing capacity and utility, organisations will be better able to support staff in the development of their skills and competencies. This may be particularly important in relation to supporting staff to manage

complex clinical situations that can be more likely to occur in forensic mental health settings.

Information from the study will support the development and provision of forensic mental health services and staff training. The methodology developed for this study may also prove useful in assessing the effectiveness of therapeutic milieu programs. As well as evaluating changes in staff's skills and abilities following mentalization based training. This study may also have practical applications in terms of shaping the direction of future research in this area as it intends to produce hypotheses and methodological considerations to be explored within future research.

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